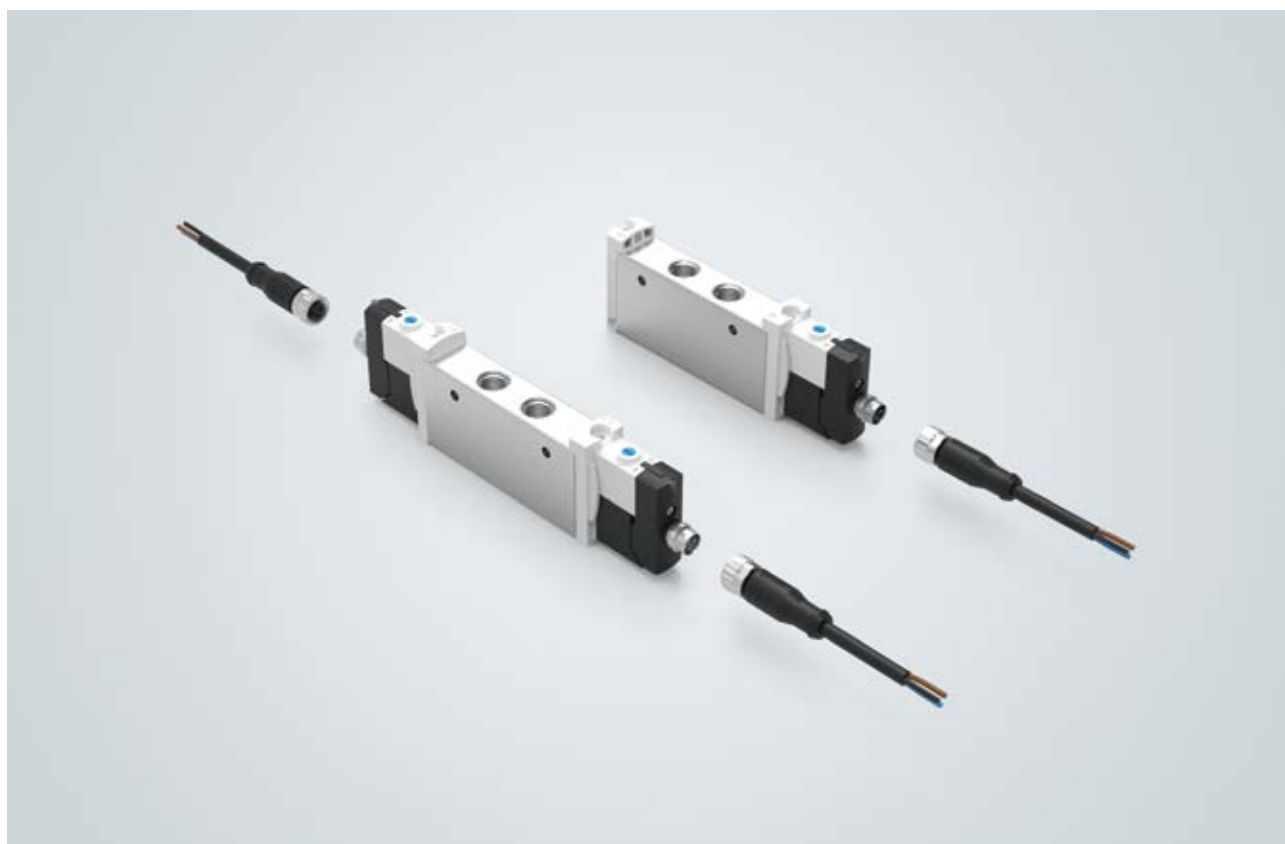


Valve Island

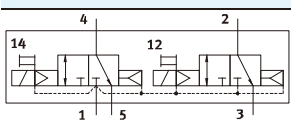
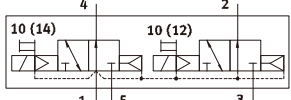
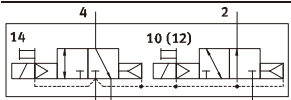
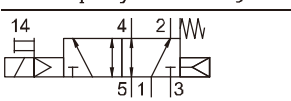
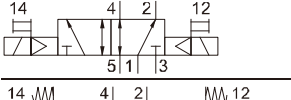
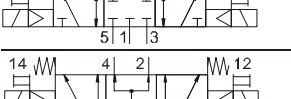
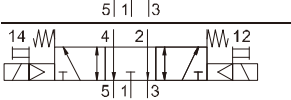
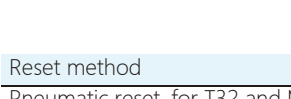
Solenoid valve/Valve island

Solenoid valve	2.1
Valve island	2.2
Wide body solenoid valve	2.3
Narrow body solenoid valve	2.4
Accessories	2.5



Solenoid valve FAS-L10 In-line valve

Order NO. – In-line valve M5

FAS	-	10	-	-	-
Valve structure					
In-line, single valve					L
Valve width					
10 mm					10
Valve function					
					T32C
					T32U
					T32H
					M52
					B52
					P53C
					P53U
					P53E
Reset method					
Pneumatic reset, for T32 and M52					A
Mechanical spring return for T32 and M52					M
Suitable for B52 and P53					-
Pilot pneumatic source					
Internal					-
External					Z




Connection cable	
N1...4	M8x1, 3Pin
Electrical connection	
M8	Single plug M8, 3 Pin
Exhaust, for FAS-L	
U	Muffler
-	M5 thread size
Port interface	
M5	M5 thread size
Q3	Push-in connector 3 mm/M5
Q4	Push-in connector 4 mm/M5

Solenoid valve FAS-L10 In-line valve M5

Technical Parameters

Function

2x3/2C, 2x3/2U, 2x3/2H
 2-position 5-way valve,
 single electric control
 2-position 5-way valve,
 double solenoid
 5/3C, 5/3U, 5/3E

-  Valve width 10 mm
-  Flow 125 ... 220 l/min
-  Operating voltage 5, 12 and 24 V DC



The main technical parameters

Valve function	T32-A	T32-M			M52-A	B52	M52-M	P53	
Normal position	C ¹⁾ U ²⁾ H ⁴⁾	C ¹⁾	U ²⁾	H ⁴⁾	-	-	-	C ¹⁾ U ²⁾ E ³⁾	
Stable position	Single electric control					Double electric control	Single electric control	Single electric control	
Reset method: Pneumatic reset	Yes	No			Yes	-	No	No	
Reset method: Mechanical spring return	No	Yes			No	-	Yes	Yes	
Port 1 vacuum operated	No	When using external pilot only							
Design	Piston slide valve								
Sealing principle	Soft seal								
Drive mode	Electric								
Control method	Pilot control								
Pilot pneumatic source	Internal or external								
Exhaust function	With flow control								
Rated flow	[l/min]	150	135	125	125	220	190	210	
Flow on circuit board	[l/min]	150	135	125	125	220	190	210	
Switching time On/Off	[ms]	6/16			8/11			-	8/24 10/30
Transition time	[ms]	-					7	-	16
Valve width	[mm]	10							
Port	1, 2, 3, 4, 5	M5							
	12/14	M3							
Product weight	[g]	55	54			45	55	44	55
Certified		c UL us - Certification (OL) c CSA us - Certification (OL)							
CEFlags (see Declaration of Conformity)		Conforms to EU EMC guidelines							
Corrosion resistance grade CRC		2							

- 1) C = Always closed / Mid-position closed
- 2) U = Normally open / Mid-position pressurised
- 3) E = Mid-position exhausted
- 4) H = 2x2-position 3-way valve is integrated into one housing, 1x normally closed and 1x normally open

Solenoid valve FAS-L10 In-line valve M5

Technical Parameters

Working and environmental conditions							
Valve function		T32-A ¹⁾	T32-M ²⁾	M52-A	B52	M52-M	P53
Working medium		Compressed air according to ISO 8573-2010 [7:4:4]					
Work pressure	Inner	[bar]	1.5 ... 8	2.5 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8
	Outer	[bar]	1.5 ... 10	-0.9 ... 10			-0.9 ... 8 -0.9 ... 10
Pilot pressure ³⁾		[bar]	1.5 ... 8	2 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8
Ambient temperature		[°C]	-5 ... +50, -5 ... +60 , with reduced hold current function				
Medium temperature		[°C]	-5 ... +50, -5 ... +60 , with reduced hold current function				

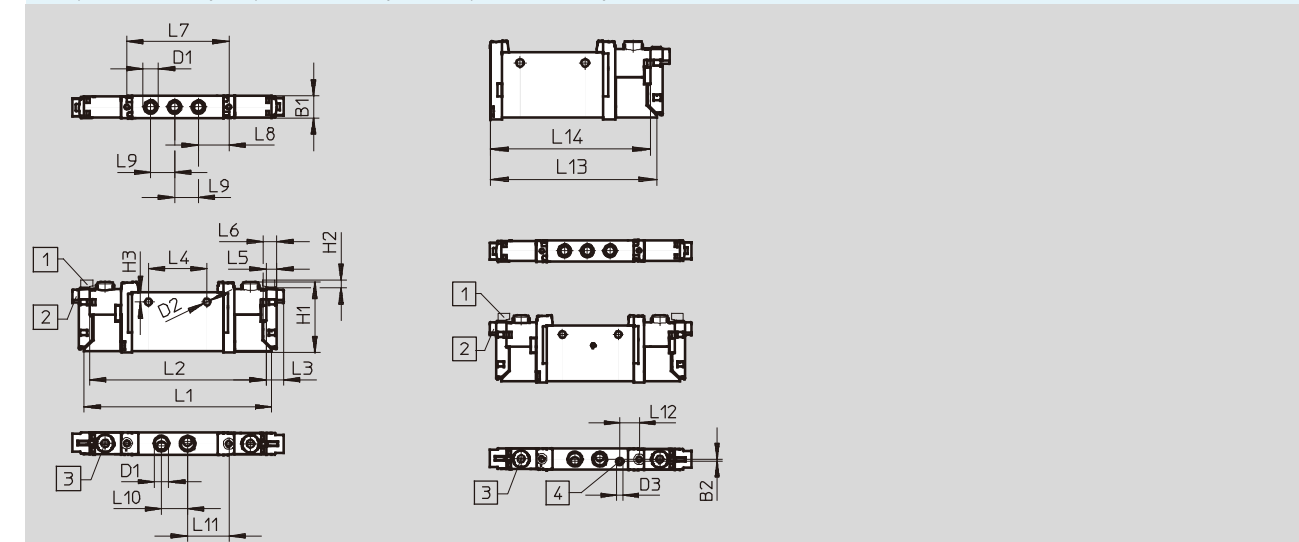
- 1) Pneumatic reset
- 2) Mechanical spring return
- 3) Minimum pilot pressure is 50% of working pressure

Electrical parameters	
Electrical connection	M8 connector
Working voltage	[V DC] 5, 12 and 24±10%
Power	[W] 1, reduced to 0.35 by reducing hold current function
Continuous energization rate ED	[%] 100
Protection class according to EN 60529	IP40 (with socket), IP65 (for M8)

Material	
Case	Wrought aluminum alloy
Seals	HNBR, NBR
Material Precautions	RoHS compliant

Size

2x2-position 3-way, 2-position 5-way and 3-position 5-way valves



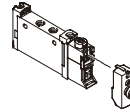
1) Vertical electrical connector 2) Horizontal electrical connector 3) Manual override 4) Connection for external pilot air supply

Type	B1	B2	D1	D2	D3	H1	H2	H3	L1	L2	L3	L4
FAS-L-10 -...-M5...	10.2	-	M5	3.2	M3	32.5	3.6	4.4	86.5	81.5	8	27

Type	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14
FAS-L-10 -...-M5...	4.85	6.15	47	14	11	12	19	-	69.2	66.7

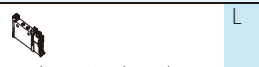
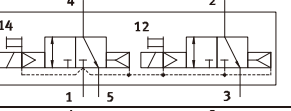
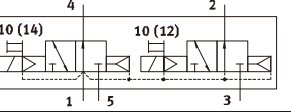
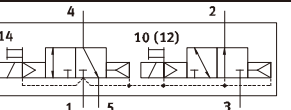
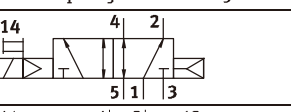
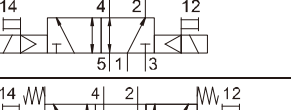
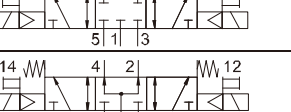
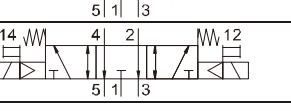
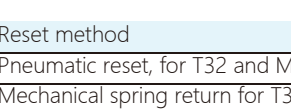
Solenoid valve FAS-L10 In-line valve M5



Order data

Order data				
Description	Order NO.	Type		
In-line valve M5 with M8 connector				
2x2-position 3-way valve				
 Internal, pilot pneumatic source	Normally closed, reset method: Pneumatic reset	8100101058	FAS-L10-T32C-AT-M5-M8	
	Normally open, reset method: Pneumatic reset	8100201058	FAS-L10-T32U-AT-M5-M8	
	1x normally open, 1x normally closed, reset method: Pneumatic reset	8100301058	FAS-L10-T32H-AT-M5-M8	
	Normally closed, reset method: Mechanical spring reset	8100102058	FAS-L10-T32C-MT-M5-M8	
	Normally open, return mode: Mechanical spring return	8100202058	FAS-L10-T32U-MT-M5-M8	
	1x normally open, 1x normally closed, return mode: Mechanical spring return	8100302058	FAS-L10-T32H-MT-M5-M8	
2-position 5-way valve, single solenoid				
Internal, pilot pneumatic source	Return mode: Mechanical spring return	8100402058	FAS-L10-M52-MT-M5-M8	
2-position 5-way valve, double electric control				
Internal, pilot pneumatic source		8100500058	FAS-L10-B52-T-M5-M8	
3-position 5-way valve				
Internal, pilot pneumatic source	Mid-position closed	8100600058	FAS-L10-P53C-T-M5-M8	
	Mid-position pressurised	8100800058	FAS-L10-P53E-T-M5-M8	
	Mid-position exhausted	8100700058	FAS-L10-P53U-T-M5-M8	

Solenoid valve FAS-L14 pipe valve G 1/8

Order No. – In-Line Valve G 1/8

FAS	-	14	-	-	-
Valve structure					
	L				
In-line, single valve					
Valve width					
14 mm					14
Valve function					
					T32C
					T32U
					T32H
					M52
					B52
					P53C
					P53U
					P53E
Reset method					
Pneumatic reset, for T32 and M52					A
Mechanical spring return for T32 and M52					M
Suitable for B52 and P53					-
Pilot pneumatic source					
Internal					-
External					Z

Connection cable	
N1..4	M8x1, 3Pin 
Electrical connection	
M8	Single plug M8, 3 Pin 
Exhaust, for FAS-L	
U	Muffler
-	G 1/8 thread size
Port interface	
G18	G 1/8 thread size
Q4	Push-in connector 4 mm/G 1/8
Q6	Push-in connector 6 mm/G 1/8
Q8	Push-in connector 8 mm/G 1/8




Solenoid valve FAS-L14 pipe valve G 1/8

Technical Parameters

Function

2x3/2C, 2x3/2U, 2x3/2H
2-position 5-way valve,
single electric control

2-position 5-way valve,
double solenoid
5/3C, 5/3U, 5/3E

-  - Valve width 14 mm
-  - Flow 480 ... 730 l/min
-  - Operating voltage 5, 12 and 24 V DC



The main technical parameters

Valve function	T32-A	T32-M	M52-A	B52	M52-M	P53					
Normal position	C ¹⁾ U ²⁾ H ⁴⁾	C ¹⁾ U ²⁾ C ¹⁾	-	-	-	C ¹⁾ U ²⁾ E ³⁾					
Stable position	Single electric control			Double electric control	Single electric control						
Reset method: Pneumatic reset	Yes	No	Yes	-	No	No					
Reset method: Mechanical spring return	No	Yes	No	-	Yes	Yes					
Port 1 vacuum operated	No	Only with external pilot									
Design	Piston slide valve										
Sealing principle	Soft										
Drive mode	Electric										
Control method	Pilot										
Pilot pneumatic source	Inside or outside										
Exhaust function	With flow control										
Nominal diameter	[mm]	4.6	4.3	5.6							
Rated flow	[l/min]	650	600	650	550	500	730	780	650	600	
Flow on circuit board	[l/min]	620	580	520	480	480	680	730	620	580	
Switching time On/Off	[ms]	8/23		11/15		14/22		-	13/35		12 /40
Transition time	[ms]	-						8	-		20
Valve width	[mm]	14									
Port	1, 2, 3, 4, 5	G 1/8									
	12/14	M5									
Product weight	[g]	89		80		78	89	70	89		
Certified	c UL us - Certification (OL)										
	c CSA us (OL)										
CEFlags (see Declaration of Conformity)	Conforms to EU EMC guidelines										
Corrosion resistance grade CRC	2										

- 1) C= Always closed /Mid-position closed
- 2) U= Normally open/Mid-position pressurised
- 3) E= Mid-position exhausted
- 4) H=2x2-position 3-way valve is integrated into one housing, 1x normally closed and 1x normally open

Solenoid valve FAS-L14 pipe valve G $\frac{1}{8}$

Technical Parameters

Working and environmental conditions

Valve function	T32-A ¹⁾	T32-M ²⁾	M52-A ¹⁾	B52	M52-M ²⁾	P53
Working medium	Compressed air according to ISO 8573-2010 [7:4:4]					
Work pressure	Inner pilot [bar]	1.5 ... 8	3.5 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8
	Outer pilot [bar]	1.5... 10	-0.9... 10			-0.9... 8 -0.9... 10
Pilot pressure ³⁾	[bar]	1.5 ... 8	2 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8
Ambient temperature	[°C]	-5 ... +50, -5 ... +60 , with reduced hold current function				
Medium temperature	[°C]	-5 ... +50, -5 ... +60 , with reduced hold current function				

- 1) Pneumatic reset
- 2) Mechanical spring return
- 3) Minimum pilot pressure is 50% of working pressure

Electrical parameters

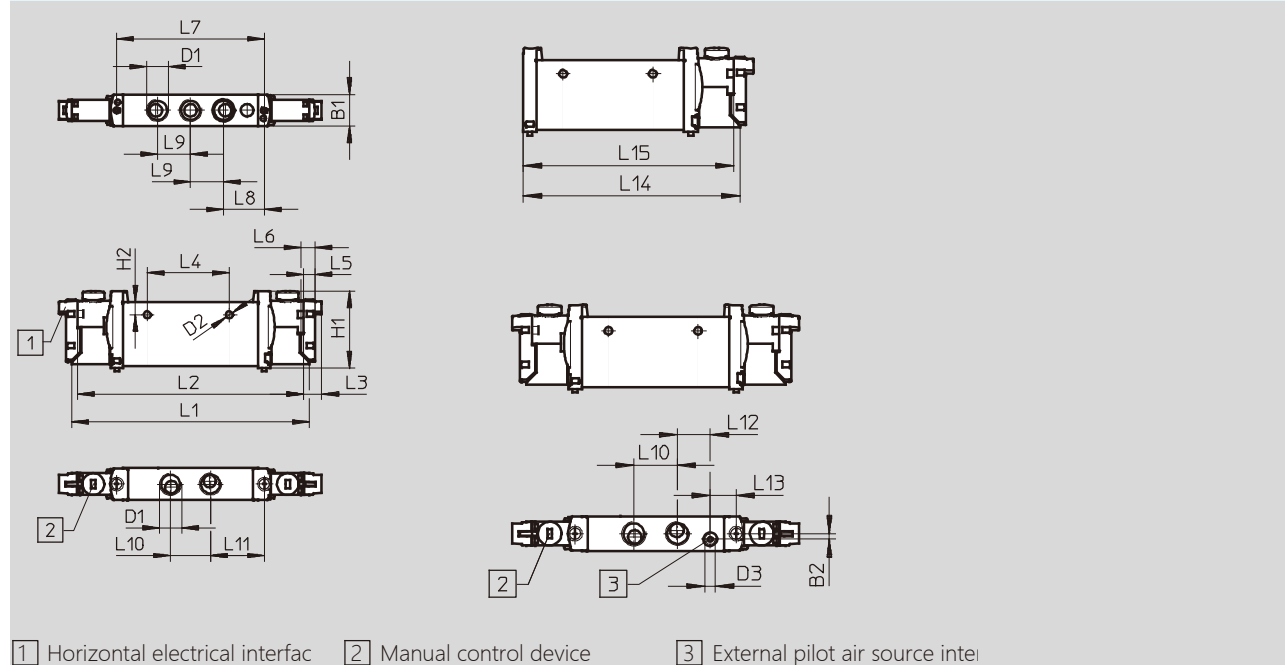
Electrical connection	M8 connector
Working voltage [V DC]	5, 12 and 24 ±10%
Power [W]	1, reduced to 0.35 by reducing hold current function
Continuous energization rate ED [%]	100
Protection class according to EN 60529	IP40 (with socket), IP65 (for M8)

Material

Case	Wrought aluminum alloy
Seals	HNBR, NBR
Material Precautions	RoHS compliant

Size

2x2-position 3-way, 2-position 5-way and 3-position 5-way valves



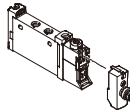
Type	B1	B2	D1	D2	D3	H1	H2	L1	L2	L3	L4	L5	L6
FAS-L-14 -...-G18...	14.4	2.3	G $\frac{1}{8}$	Ø3.2	M5	34.8	5.8	107	102	8	37	4.85	6.15

Type	L7	L8	L9	L10	L11	L12	L13	L14	L15
FAS-L-14 -...-G18...	66.5	18.35	14.9	18	24.25	13.45	10.8	89.4	86.95

Solenoid valve FAS-L14 pipe valve G $\frac{1}{8}$


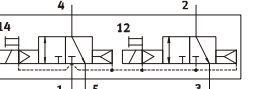
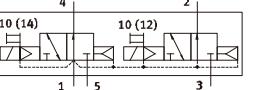
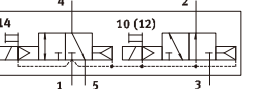
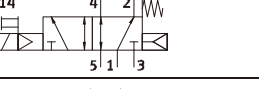


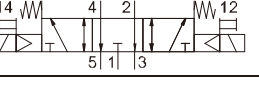
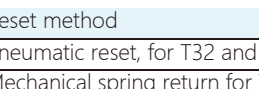
Order data

Order data

Description	Order NO.	Type
In-line valve G $\frac{1}{8}$ with M8 connector		
2x2-position 3-way valve		
 Inner pilot	Normally closed, reset method: Pneumatic reset	8140101188 FAS-L14-T32C-AT-G18-M8
	Normally open, reset method: Pneumatic reset	8140201188 FAS-L14-T32U-AT-G18-M8
	1x normally open, 1x normally closed, reset method: Pneumatic reset	8140301188 FAS-L14-T32H-AT-G18-M8
	Normally closed, reset method: Pneumatic reset	8140102188 FAS-L14-T32C-MT-G18-M8
	Normally open, reset method: Pneumatic reset	8140202188 FAS-L14-T32U-MT-G18-M8
	1x normally open, 1x normally closed, reset method: Pneumatic reset	8140302188 FAS-L14-T32H-MT-G18-M8
2-position 5-way valve, single solenoid		
Inner pilot	Return mode: Pneumatic reset	8140401188 FAS-L14-M52-AT-G18-M8
	Return mode: Mechanical spring return	8140402188 FAS-L14-M52-MT-G18-M8
2-position 5-way valve, double electric control		
Inner pilot		8140500188 FAS-L14-B52-T-G18-M8
3-position 5-way valve		
Inner pilot	Mid-position closed	8140600188 FAS-L14-P53C-T-G18-M8
	Mid-position pressurised	8140800188 FAS-L14-P53E-T-G18-M8
	Mid-position exhausted	8140700188 FAS-L14-P53U-T-G18-M8

Solenoid valve FAS-L18 In-line valve G $\frac{1}{4}$

Order NO. – In-line valve G $\frac{1}{4}$

FAS	-	18	-	-	-
Valve structure					
					L
In-line, single valve					
Valve width					
18 mm					18
Valve function					
					T32C
					T32U
					T32H
					M52
					B52
					P53C
					P53U
					P53E
Reset method					
Pneumatic reset, for T32 and M52					A
Mechanical spring return for T32 and M52					M
pneumatic return/Mechanical spring return for M52					R
Suitable for B52 and P53					-
Pilot pneumatic source					
Internal					-
External					Z




Connection cable	
N1...4	M8x1, 3Pin
Electrical connection	
M8	Single plug M8, 3 Pin
Exhaust, for FAS-L	
U	Muffler
-	G $\frac{1}{4}$ thread size
Port interface	
G14	G $\frac{1}{4}$ thread size
Q6	Push-in connector 6 mm/G $\frac{1}{4}$
Q8	Push-in connector 8 mm/G $\frac{1}{4}$
Q10	Push-in connector 10 mm/G $\frac{1}{4}$

Solenoid valve FAS-L18 In-line valve G $\frac{1}{4}$

Technical Parameters

Function

2x3/2C, 2x3/2U, 2x3/2H
 2-position 5-way valve,
 single electric control
 2-position 5-way valve,
 double solenoid
 5/3C, 5/3U, 5/3E

-  - Valve width 18 mm
-  - Flow 1000 ... 1380 l/min
-  - Operating voltage 5, 12 and 24 V DC



The main technical parameters

Valve function	T32-A	T32-M	M52-A	B52	M52-M	P53
Normal position	C ¹⁾ U ²⁾ H ⁴⁾	C ¹⁾ U ²⁾ C ¹⁾	-	-	-	C ¹⁾ U ²⁾ E ³⁾
Stable position	Single electric control			Double electric control	Single electric control	
Reset method: Pneumatic reset	Yes	No	Yes	-	No	No
Reset method: Mechanical spring return	No	Yes	No	-	Yes	Yes
Port 1 vacuum operated	No	Only with external pilot				
Design	Piston slide valve					
Sealing principle	Soft					
Drive mode	Electric					
Control method	Pilot					
Pilot pneumatic source	Internal or external					
Exhaust function	With flow control					
Hand control device	Available as unlocked, slide, unlocked/locked, or locked					
Installation method	Optional through-hole installation or installation on the air circuit board					
Installation location	Arbitrary					
Nominal diameter	[mm]	5.7	6.9	7.3	6.9	6.5 6.3
Rated flow	[l/min]	1000	1300	1380	1300	1200 1000
Flow on circuit board		1000	1300	1380	1300	1200 1000
Switching time On/Off	[ms]	13/27	15/22	15/31	10/45	15/48
Transition time	[ms]	-	-	11	-	29
Valve width	[mm]	18				
Port	1, 2, 3, 4, 5 12/14	G $\frac{1}{4}$ M5				
Product weight	[g]	164	154	164	154	160
Certified		c UL us - Certification (OL) c CSA us (OL)				
CEFlags (see Declaration of Conformity)		Conforms to EU EMC guidelines				
Corrosion resistance grade CRC		2				

- 1) C = Always closed /Mid-position closed
- 2) U = Normally open /Mid-position pressurised
- 3) E = Mid-position exhausted
- 4) H = 2x2-position 3-way valve is integrated into one housing, 1x normally closed and 1x normally open

Solenoid valve FAS-L18 In-line valve G $\frac{1}{4}$

Technical Parameters

Working and environmental conditions						
Valve function		T32-A ¹⁾	T32-M ²⁾	M52-A	B52	M52-M ²⁾ P53
Working medium		Compressed air according to ISO 8573-2010 [7:4:4]				
Work pressure	Inner	[bar]	1.5 ... 8	3 ... 8	2.5 ... 8	1.5 ... 8
	Outer	[bar]	1.5 ... 10	-0.9 ... 10		
Pilot pressure ³⁾		[bar]	1.5 ... 8	2 ... 8	2.5 ... 8	1.5 ... 8
Ambient temperature		[°C]	-5 ... +50, -5 ... +60, with reduced hold current function			
Medium temperature		[°C]	-5 ... +50, -5 ... +60, with reduced hold current function			

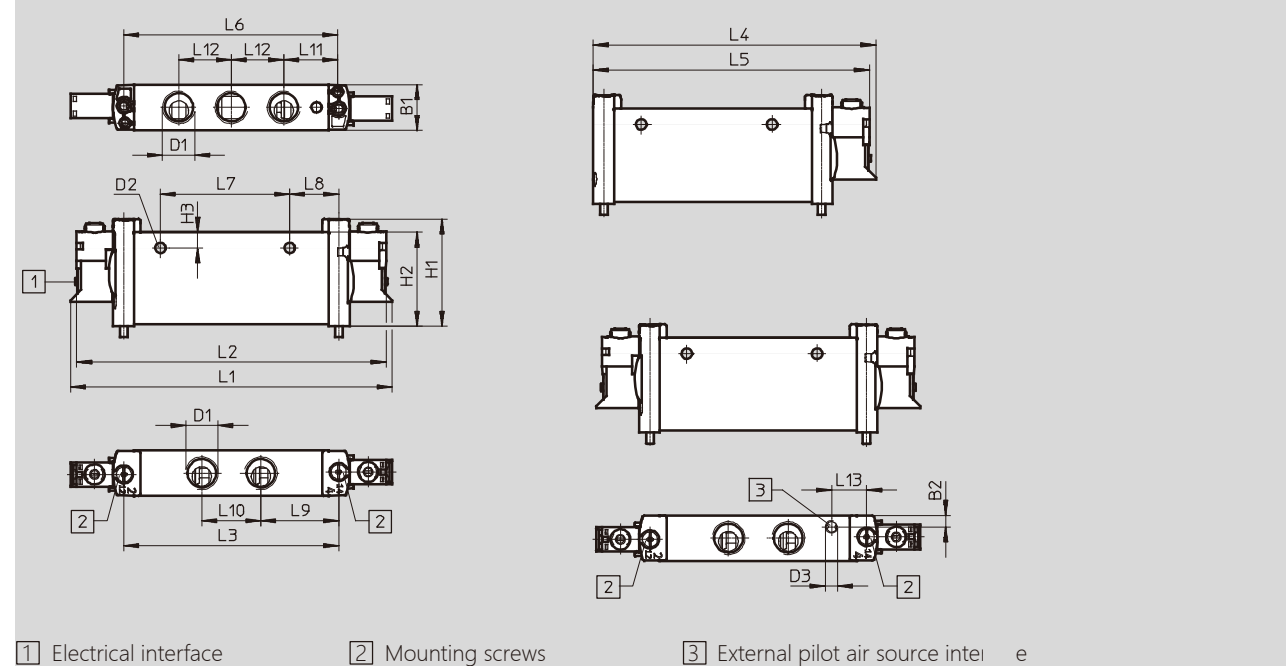
- 1) Pneumatic reset
- 2) Mechanical spring return
- 3) Minimum pilot pressure is 50% of working pressure

Electrical parameters	
Electrical connection	M8 connector
Working voltage	[V DC] 5, 12 and 24 \pm 10%
Power	[W] 1, reduced to 0.35 by reducing hold current function
Continuous energization rate ED	[%] 100
Protection class according to EN 60529	IP40 (with socket), IP65 (for M8)

Material	
Case	Wrought aluminum alloy
Seals	HNBR, NBR
Material Precautions	RoHS compliant

Size

2x2-position 3-way, 2-position 5-way and 3-position 5-way valves

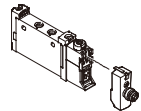


Type	B1	B2	D1	D2	D3	H1	H2	H3	L1	L2	L3	L4	L5
FAS-L-18-...	18.3	4.5	G $\frac{1}{4}$	\varnothing 4.2	M5	43.1	37.8	6.4	129.4	124.4	86.4	112.2	109.7

Type	L6	L7	L8	L9	L10	L11	L12	L13
FAS-L-18-...	86	52	19.7	31.3	23.8	21.7	21.1	14

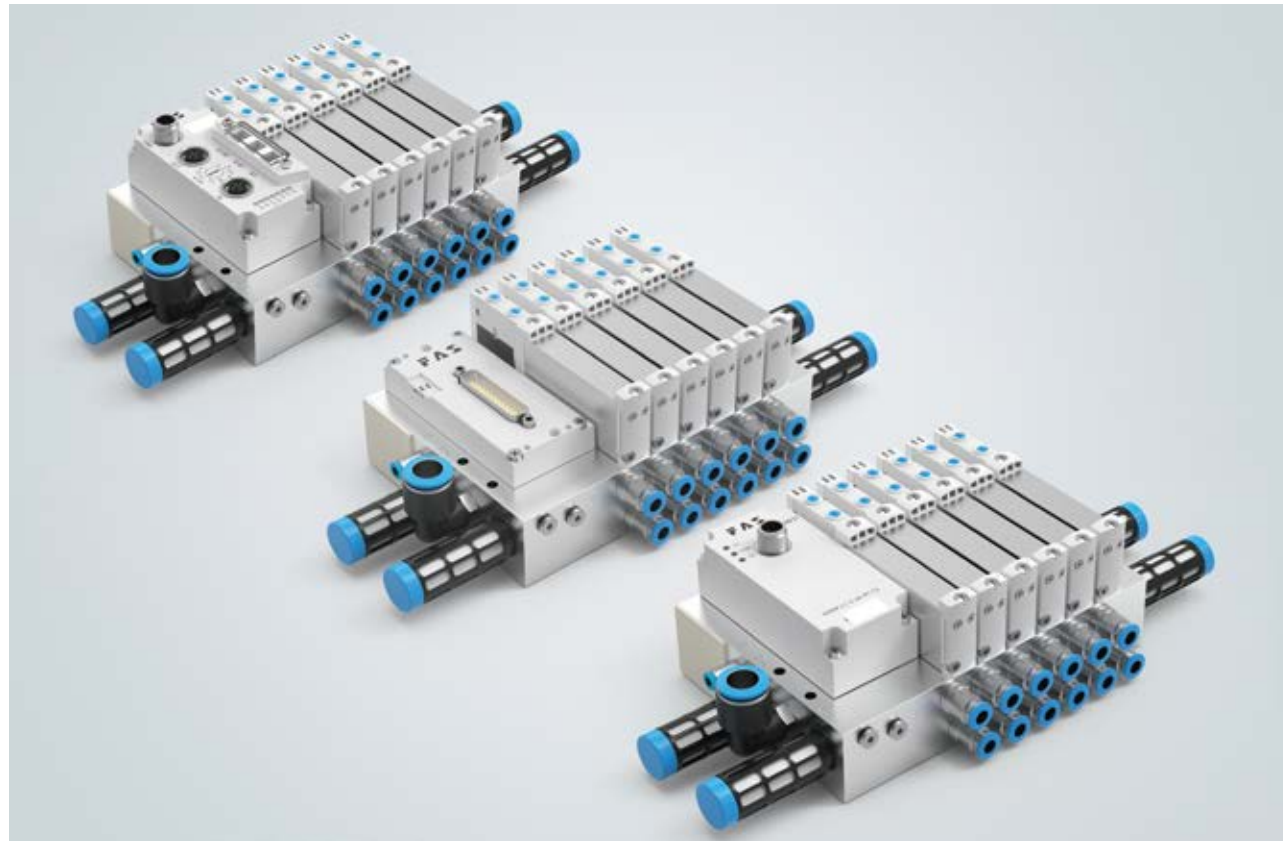
Solenoid valve FAS-L18 In-line valve G $\frac{1}{4}$

Order data

Order data				
Description	Order NO.	Type		
In-line valve G $\frac{1}{4}$ with M8 connector				
2x2-position 3-way valve				
 Inner pilot	Normally closed, reset method: Pneumatic reset	8180101148	FAS-L18-T32C-AT-G14-M8	
	Normally open, reset method: Pneumatic reset	8180201148	FAS-L18-T32U-AT-G14-M8	
	1x normally open, 1x normally closed, reset method: Pneumatic reset	8180301148	FAS-L18-T32H-AT-G14-M8	
	Normally closed, reset method: Mechanical spring reset	8180102148	FAS-L18-T32C-MT-G14-M8	
	Normally open, return mode: Mechanical spring return	8180202148	FAS-L18-T32U-MT-G14-M8	
	1x normally open, 1x normally closed, return mode: Mechanical spring return	8180302148	FAS-L18-T32H-MT-G14-M8	
2-position 5-way valve, single solenoid				
Inner pilot	Return mode: Pneumatic reset / Mechanical spring return	8180403148	FAS-L18-M52-RT-G14-M8	
	Return mode: Mechanical spring return	8180402148	FAS-L18-M52-MT-G14-M8	
2-position 5-way valve, double electric control				
Inner pilot		8180500148	FAS-L18-B52-T-G14-M8	
3-position 5-way valve				
Inner pilot	Mid-position closed	8180600148	FAS-L18-P53C-T-G14-M8	
	Mid-position pressurised	8180800148	FAS-L18-P53E-T-G14-M8	
	Mid-position exhausted	8180700148	FAS-L18-P53U-T-G14-M8	

Valve terminal FV with multi-pin plug and fieldbus interface

Main features



Innovation

- ◆ IO-Link mode for direct connection to the host IO-Link master
- ◆ Multi-pin interface optional D-Sub or flat cable
- ◆ Reversible piston spool valves, up to 24 valve position
- ◆ Reduced power consumption

Reliable

- ◆ Metal components are durable
 - Valve
 - Pneumatic board
- ◆ LED display for quick troubleshooting
- ◆ Optional manual control device: Push button, lock or cover

Valve island configuration tool

Use the valve terminal configuration tool to help you select the right valve terminal FV and order the right product more easily. Order the valve terminal FV by identification code. All valve terminals are supplied fully assembled and individually tested, minimizing assembly and installation time.

General

- ◆ Optional quick plug connector
- ◆ Multiple pressure zones possible
- ◆ The D-Sub variant and fieldbus interface are IP67 rated
- ◆ By using plugs, an internal or external pilot air supply can be implemented within the same manifold plate
- ◆ Sub-base valve with working port on the bottom for control cabinet installation

Easy to install

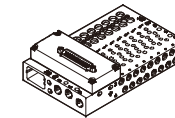
- ◆ Easy installation with included screws and seals
- ◆ The connection method can be easily changed
- ◆ Label holder for identifying valves

Valve terminal FV with multi-pin plug and fieldbus interface

Main features

Electrical interface

Multi-pin interface

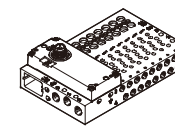


- ◆ The signal stream generated by the controller is transmitted to the valve terminal via a prefabricated multi-conductor cable or via a cable with a user-specific multi-pin connection, thus significantly reducing installation time. The valve terminal can be configured with up to 48 solenoid coils.

Variants:

- ◆ D-Sub interface
- ◆ Flat cable

Communication interface



- ◆ FAS-specific interfaces are used as the basis for fieldbus nodes (CTEUs) or for direct connection to higher-level IO-Link masters in IO-Link mode. Communication data and power are transmitted via an M12 plug on the valve terminal.

Interface options:

- ◆ as Ethernet interface for fieldbus nodes (CTEUs)
- ◆ In IO-Link mode, it is used to connect directly to the IO-Link master

Valve terminal FV with multi-pin plug and fieldbus interface

Main features - Pneumatic components

Air circuit board

For plate valves

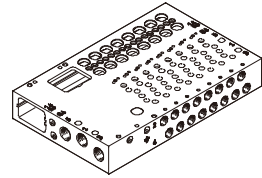
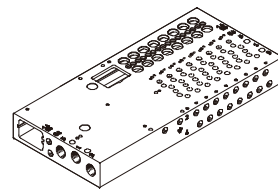


Plate valves always have an external pilot air supply. The pilot air source is connected through the air strip. For this purpose, the air strip includes a short plug and a long plug.

- ◆ For plate valves M5 (amaranth 10 mm), G1/8 (width 14 mm) and G1/4 (width 18 mm)
- ◆ For 2x 2-position 3-way valve, 2-position 3-way valve, 2-position 5-way valve and 3-position 5-way valve
- ◆ 4 to 24 valve positions with electrical interconnection

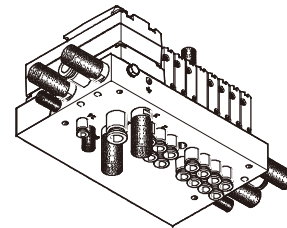
Extended



Derived type: With side output: for plate valves M5 (width 10 mm), G1/8 (width 14 mm), and G1/4 (width 18 mm)

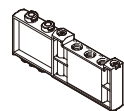
Suitable for control box installation, output is on the bottom

For plate valve M5 (width 10 mm)



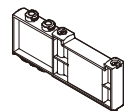
Note: If multiple valves are switched at the same time, it is recommended to use both ends of the intake and exhaust air to ensure the flow weight.

Air source plate



For auxiliary intake and exhaust through valve position

Blind plate for vacancy



Vacant cover

Pressure zone separator



For creating multiple pressure zones on valve islands

Valve terminal FV with multi-pin plug and fieldbus interface

Main features - Pneumatic components

Create pressure partitions and isolate exhaust pneumatic

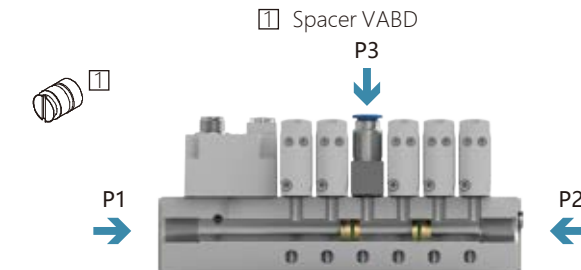
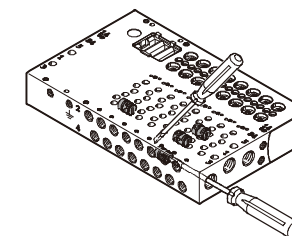
Ventilation air strips and air supply plates realize intake and exhaust. The FV's compressed air plate position and channel isolation can be freely selected. Internal air inlet passages between the air strips are isolated by means of suitable passages to create pressure zones. Pressure zone isolation is available for the following channels:

- ◆ Channel 1
- ◆ Channel 3
- ◆ Channel 5

Channel isolation

	Description
	The pressure zone of the FV is freely configurable. The following channel closures are possible: Channel 1 closed
	Channel 1,3,5 closed
	Channel 3,5 closed
	The number of pressure zones in the FV is limited only by the number of valves on the pneumatic strip. Note: Each air plate occupies one valve position.

Spacer V ABD



Valve terminal FV with multi-pin plug and fieldbus interface

Main features - Pneumatic components

Pilot pneumatic source

Internal pilot pneumatic source

Operating pressure range of 1.5 ... 8 bar, 2.5 ... 8 bar or 3... At 8 bar (depending on the valve used), an internal pilot air source is available. The pilot air supply is shunted from Channel 1 (air supply) via an internal interface.

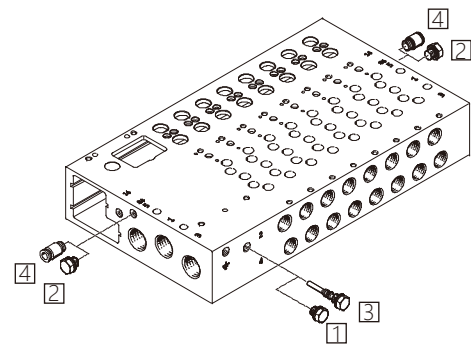
External pilot pneumatic source

Vacuum operation and working pressure, external pilot air supply required at 8 bar. The external pilot air source air port (air port 12/14) is located on the air circuit plate.

Pilot exhaust port

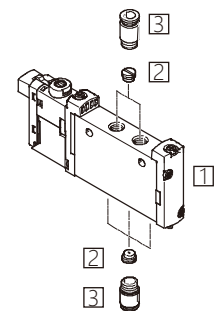
The pilot air source is exhausted through channels 82/84 on the air strip.

Pilot pneumatic source



- 1 Plug, short, for internal pilot air supply
- 2 Plug for channel 12/14 for internal pilot air supply r
- 3 Plug, long, for external pilot air supply quick plug connector, for channel
- 4 Push-in coupling for channel 12/14 for external pilot air supply strip has an internal channel between channel 12/14 and channel 1. Select the internal or external pilot air supply by inserting the plug into this internal channel.

Flow control



- 1 Valve FAS with single electrical interface
 - 2 Flow control
 - 3 Connector connection
- ◆ Half-pipe valves with single electrical connection: flow control can be set at ports 1, 2, 3, 4, 5.
 - ◆ Plate valve with single electrical connection: flow control can be set at port 2,4.
 - ◆ Valve terminal FV with multi-pin connection and fieldbus interface: flow control can be set at port 2,4.

Valve terminal FV with multi-pin plug and fieldbus interface

Main features - Pneumatic components

Different pressure operation

Vacuum operation

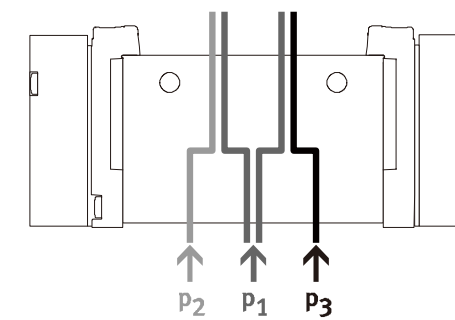
◆ 2 position 3 vent reset valve points to note: 2-position 3-way valve integrate two valves in one housing and use pneumatic reset. When these valves are used, the energy for the return action comes from port 1. Therefore, vacuum operation can only be achieved at ports 3 and 5, not at port 1. Using an external pilot air source, the 2 position 5 way valve and 3 position 5 way valve can be connected to the vacuum at ports 1, 3 and 5.

Reverse operation

◆ Due to the minimum pilot pressure that must be present in Channel 1, 2-position 3-way valve with pneumatic reset are not suitable for reverse operation.

- - Note:
There must be pressure at port 1.

Pressure plate (inner pilot air source)

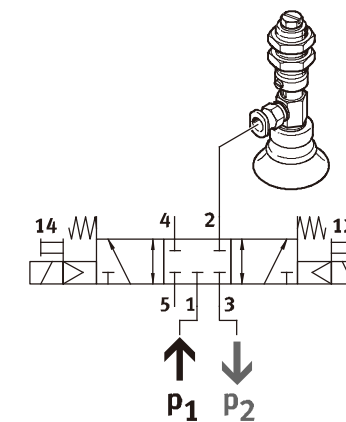


- ◆ If two different pressures are required.
- ◆ Different pressures are available at channels 1, 3 and 5.

Advantages: Any pressure or vacuum can be connected to channels 3 and 5, both internally and externally piloted.

- - Note:
- ◆ With an internal pilot air source, the minimum pilot pressure must be observed in Channel 1.
 - ◆ With a 2x2-position, 3-way valve without spring return, the minimum pilot pressure must always be observed in Channel 1.

Vacuum, ejector pulse and initial position



- ◆ Vacuum, injection pulse and initial position with internal pilot air supply can be achieved by connecting vacuum at channel 3 and injection pulse pressure at channel 1.

Valve terminal FV , with multi-pin plug and fieldbus connection

Order No. - Plate valve M5

Function


3/2C, 3/2U

2x3/2C, 2x3/2U, 2x3/2H

2-position 5-way valve,
Single electronic control

2-position 5-way valve,
Double electronic control
5/3C, 5/3U, 5/3E

 Width 10 mm

 Flow
130 ... 300 l/min

 Operating voltage
24 V DC



The main technical parameters

Valve function	T32-A	T32-M	M32-R	B52	M52-R	P53
Normal position	C ¹⁾ U ²⁾ H ⁴⁾	C ¹⁾ U ²⁾ H ⁴⁾	C ¹⁾ U ²⁾	-	-	C ¹⁾ U ²⁾ E ³⁾
Stable position	Single electronic control		Double electronic control	Single electronic control		
Reset method: Pneumatic reset	Yes	No	No	-	Yes ⁵⁾	-
Reset method: Mechanical spring return	No	Yes	Yes	-	Yes ⁵⁾	-
Port 1 vacuum operated	No	When using external pilot				
Design	Piston slide valve					
Sealing principle	Soft					
Drive mode	Electric					
Control method	Pilot					
Pilot pneumatic source	External					
Exhaust function	With flow control					
Switch position display	LED					
Standard rated flow M5/M7 [l/min]	160	140	140	300	300	260
Flow on pneumatic circuit board, M5, front end [l/min]	150	130	130	220	220	200
Flow on the manifold, M7, front end [l/min]	160	140	140	270	270	250
Flow on manifold; M7, bottom [l/min]	160	140	140	300	300	260
Valve width [mm]	10					
Port	1, 3, 5, 12/14, 82/84					
	2, 4					
Product weight [g]	59		60	53		58
Certified	c UL us - certified (OL) c CSA us (OL)					
CE marking (see declaration of conformity)	Conforms to EU EMC guidelines					
Corrosion resistance grade CRC	2					

Working and environmental conditions

Valve function	T32-A ¹⁾	T32-M ²⁾	M32	B52	M52-M ²⁾	P53
Working medium	Compressed air according to ISO 8573-1:2010 [7:4:4]					
Work pressure Internal pilot pneumatic supply[bar]	1.5 ... 8	2.5 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8	3 ... 8
Outer pilot [bar]	1.5 ... 10	-0.9 ... 10			-0.9 ... 8	-0.9 ... 10
Pilot pressure ⁴⁾ [bar]	1.5 ... 8	2 ... 8	2 ... 8	1.5 ... 8	3 ... 8	3 ... 8
Ambient temperature [°C]	-5 ... +60					
Medium temperature [°C]	-5 ... +60					

Electrical parameters

Electrical connections	Drop-in
Working voltage [V DC]	24 ±10%
Power consumption per solenoid [W]	1/ 0.4 (25 ms later)
Continuous energization rate ED [%]	100
Maximum switching frequency [Hz]	3
Protection class according to EN 60529	The standard type has an IP40 degree of protection; The degree of protection is IP67; With D-SUB and IO-Link interfaces)

1) C = Normally closed/Mid-position closed

2) U = Normally open/Mid-position pressurised

3) E = Mid-position exhausted

4) H=2x 2-position 3-way valve integrated in one shell, 1x normally closed and 1x normally open

5) Hybrid reset mode

Valve terminal FV , with multi-pin plug and fieldbus connection

Technical data – Sub-base valve M5

Valve switching time

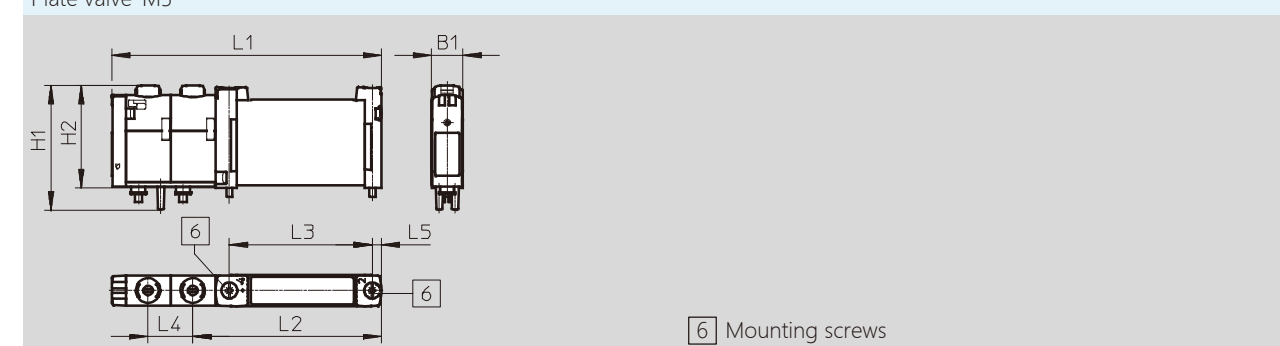
Valve function	T32-A ¹⁾	T32-M ²⁾	M32	B52	M52-M ²⁾	P53
Switch time, on [ms]	8	10	10	-	12	12
Switch time, off [ms]	20	20	20	-	30	38
Conversion time [ms]	-	-	-	9	-	16

1) Pneumatic reset

2) Mechanical spring return

Size

Plate valve M5



Type	B1	H1	H2	L1	L2	L3	L4	L5
FAS-B10-...	10.3	40.9	33.6	88.6	62	47	14.7	3

Ordering data




Illustrate	Order NO.	Type
Plate valve M5		
2x2-position 3-way valve		
External, pilot pneumatic source		
Normally closed, reset method: Pneumatic reset	8100111050	FAS-B10-T32C-AZ
Normally open, reset method: Pneumatic reset	8100211050	FAS-B10-T32U-AZ
1x normally open, 1x normally closed, reset method: Pneumatic reset	8100311050	FAS-B10-T32H-AZ
Normally closed, reset method: Mechanical spring reset	8100112050	FAS-B10-T32C-MZ
Normally open, return mode: Mechanical spring return	8100212050	FAS-B10-T32U-MZ
1x normally open, 1x normally closed, return mode: Mechanical spring return	8100312050	FAS-B10-T32H-MZT
2-position 5-way valve, Single electronic control		
External, pilot pneumatic source		
Return mode: Mechanical spring return	8100412050	FAS-B10-M52-MZ
Return mode: Pneumatic reset / Mechanical spring return	8100413050	FAS-B10-M52-RZ
2-position 5-way valve, Double electronic control		
External, pilot pneumatic source	8100510050	FAS-B10-B52-Z
3-position 5-way valve		
External, pilot pneumatic source		
Mid-position closed	8100610050	FAS-B10-P53C-Z
Mid-position pressurised	8100710050	FAS-B10-P53U-Z
Mid-position exhausted	8100810050	FAS-B10-P53E-Z

Valve terminal FV , with multi-pin plug and fieldbus connection

Technical specifications - Plate valve G 1/8

Function

3/2C, 3/2U
2x3/2C, 2x3/2U, 2x3/2H
2-position 5-way valve,
Single electronic control
2-position 5-way valve,
Double electronic control
5/3C, 5/3U, 5/3E

-  Width 14 mm
-  Flow
350 ... 560 l/min
-  Operating voltage
24 V DC



The main technical parameters

Valve function	T32-A	T32-M	M32-A	M52-A	B52	M52-M	P53
Normal position	C ¹⁾ U ²⁾ H ⁴⁾	C ¹⁾ U ²⁾ H ⁴⁾	C ¹⁾ U ²⁾	-	-	-	C ¹⁾ U ²⁾ E ³⁾
Stable position	Single electronic control			Double electronic control		Single electronic control	
Reset method: Pneumatic reset	Yes	No	Yes	Yes	-	No	-
Reset method: Mechanical spring return	No	Yes	No	No	-	Yes	-
Port 1 vacuum operated	No	When using external pilot					
Design	Piston slide valve						
Sealing principle	Soft seal						
Drive mode	Electric						
Control method	Pilot control						
Pilot pneumatic source	External						
Exhaust function	With flow control						
Toggle position display	LED						
Standard rated flow G18 [l/min]	530	470	350	550	560	550	510
Flow G18 on the pneumatic circuit board, front [l/min]	490	440	320	500	510	500	470
Flow G18 on air way plate; bottom [l/min]	530	470	350	550	560	550	510
Valve width [mm]	14						
Port	1, 3, 5, 12/14, 82/84		On the pneumatic circuit board				
	2, 4		On the pneumatic circuit board				
Product weight [g]	102	100	91	98	89	95	
Certified	c UL us - certified (OL)						
	c CSA us (OL)						
CE marking (see declaration of conformity)	Conforms to EU EMC guidelines						
Corrosion resistance grade CRC	2						

- 1) C = Normally closed/Mid-position closed
2) U = Normally open/Mid-position pressurised
3) E = Mid-position exhausted
4) H=2x 2-position 3-way valve integrated in one shell, 1x normally closed and 1x normally open

Working and environmental conditions

Valve function	T32-A ¹⁾	T32-M ²⁾	M32	M52-A ¹⁾	B52	M52-M ²⁾	P53
Working medium	Compressed air according to ISO 8573-1:2010 [7:4.4]						
Work pressure Internal pilot pneumatic supply [bar]	1.5 ... 8	3.5 ... 8	2.5 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8	3 ... 8
Outer pilot [bar]	1.5 ... 10	-0.9 ... 10				-0.9 ... 8	-0.9 ... 10
Pilot pressure ³⁾ [bar]	1.5 ... 8	2 ... 8	2.5 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8	3 ... 8
Ambient temperature [°C]	-5 ... +60						
Medium temperature [°C]	-5 ... +60						

- 1) Pneumatic reset
2) Mechanical spring return
3) Minimum pilot pressure is 50% of working pressure

Valve terminal FV , with multi-pin plug and fieldbus connection

Technical specifications - Plate valve G 1/8

Electrical parameters

Electrical connections	Drop-in
Working voltage [V DC]	24 ±10%
Power [W]	1/0.4 (25 ms later)
Continuous energization rate ED [%]	100
Maximum switching frequency [Hz]	3
Protection class according to EN 60529	IP67

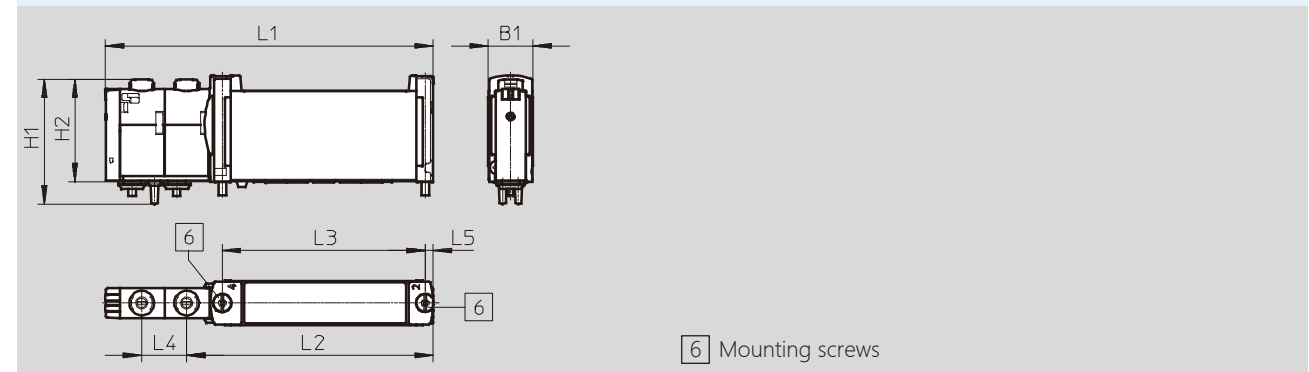
Valve switching time

Valve function	T32-A ¹⁾	T32-M ²⁾	M32	M52-A ¹⁾	B52	M52-M ²⁾	P53
Switch time, on [ms]	10	13	13	13	-	10	15
Switch time, off [ms]	29	21	20	26	-	38	42
Conversion time [ms]	-	-	-	-	9	-	25

- 1) Pneumatic reset
2) Mechanical spring return

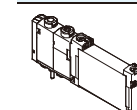
Size

Plate valve G 1/8



Type	B1	H1	H2	L1	L2	L3	L4	L5
FAS-B14-...	14.7	40.9	33.5	107.6	81	66.5	14.7	2.8




Ordering data

	Illustrate	Order NO.	Type	
Plate valve G 1/8				
	2x2-position 3-way valve			
	External, pilot pneumatic source	Normally closed, reset method: Pneumatic reset	814011180	FAS-B14-T32C-AZ
		Normally open, reset method: Pneumatic reset	814021180	FAS-B14-T32U-AZ
	1x normally open, 1x normally closed, reset method: Pneumatic reset	Normally closed, reset method: Mechanical spring reset	814031180	FAS-B14-T32H-AZ
		Normally open, return mode: Mechanical spring return	8140212180	FAS-B14-T32U-MZ
	1x normally open, 1x normally closed, return mode: Mechanical spring return		8140312180	FAS-B14-T32H-MZ
2-position 5-way valve, Single electronic control	External, pilot pneumatic source	Return mode: Pneumatic reset	814041180	FAS-B14-M52-AZ
		Return mode: Mechanical spring return	8140412180	FAS-B14-M52-MZ
2-position 5-way valve, Double electronic control	External, pilot pneumatic source		8140510180	FAS-B14-B52-Z
3-position 5-way valve	External, pilot pneumatic source	Mid-position closed	8140610180	FAS-B14-P53C-Z
		Mid-position pressurised	8140710180	FAS-B14-P53U-Z
		Mid-position exhausted	8140810180	FAS-B14-P53E-Z

Valve terminal FV , with multi-pin plug and fieldbus connection

Technical specifications - Plate valve G $\frac{1}{4}$

Function

- 2x3/2C, 2x3/2U, 2x3/2H -  Width 18 mm
- 2-position 5-way valve, Single electronic control -  Flow 800 ... 1000 l/min
- 2-position 5-way valve, Double electronic control -  Operating voltage 24 V DC



The main technical parameters

Valve function	T32-A	T32-M	M52-R	B52	M52-M	P53
Normal position	C ¹⁾ U ²⁾ H ⁴⁾	C ¹⁾ U ²⁾ H ⁴⁾	-	-	-	C ¹⁾ U ²⁾ E ³⁾
Stable position	Single electronic control		Double electronic control		Single electronic control	
Reset method: Pneumatic reset	Yes	No	Yes ⁵⁾	-	No	-
Reset method: Mechanical spring return	No	Yes	Yes ⁵⁾	-	Yes	-
Port 1 vacuum operated	No	Out-of-band pilot				
Design	Spool valve					
Sealing principle	Soft seal					
Drive mode	Electrical way					
Control method	Pilot control					
Pilot gas source	External					
Exhaust function	With flow control					
Toggle position display	LED					
Flow rate of G14 (front) on the air circuit board [l/min]	800	800	950	1000	950	900
Width [mm]	18					
Port	1, 3, 5, 12/14, 82/84		On the pneumatic circuit board			
	2, 4		On the pneumatic circuit board			
Product weight [g]	145	147	138	145	138	140
Certified	c UL us - certified(OL) c CSA us (OL)					
CE marking (see declaration of conformity)	Conforms to EU EMC guidelines					
Corrosion resistance grade CRC	2					

- 1) C = Normally closed/Mid-position closed
 2) U = Normally open/Mid-position pressurised
 3) E = Mid-position exhausted
 4) H=2x 2-position 3-way valve integrated in one shell, 1x normally closed and 1x normally open
 5) Hybrid reset mode

Valve terminal FV , with multi-pin plug and fieldbus connection

Technical specifications - Plate valve G $\frac{1}{4}$

Working and environmental conditions

Valve function	T32-A ¹⁾	T32-M ²⁾	M52-A	B52	M52-M ²⁾	P53
Working medium	Compressed air according to ISO 8573-1:2010 [7:4:4]					
Pilot medium	Compressed air according to ISO 8573-1:2010 [7:4:4]					
Description of working medium/Pilot medium	Lubricated media can be used (once used, subsequent runs must be used at all times)					
Work pressure Internal pilot pneumatic source [bar]	1.5 ... 8	2 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8	3 ... 8
External pilot pneumatic source [bar]	1.5 ... 10	-0.9 ... 10			-0.9 ... 8	-0.9 ... 10
Pilot pressure ³⁾ [bar]	1.5 ... 8	2 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8	3 ... 8
Ambient temperature [°C]	-5 ... +60					
Medium temperature [°C]	-5 ... +60					

- 1) Pneumatic reset
 2) Mechanical spring return
 3) Minimum pilot pressure is 50% of working pressure

Electrical parameters

Electrical connections	Drop-in
Working voltage [V DC]	24 ±10%
Power consumption [W]	1
Continuous energization rate ED [%]	100
Maximum switching frequency [Hz]	3
Protection class according to EN 60529	IP67

Security features

Mandatory inspection cycle	At least 1/week
At 0 signal, maximum forward test pulse [µs]	1600
At 1 signal, maximum negative test pulse [µs]	3000
Impact resistance	Impact test, strength class 2 according to FN 942017-5 and EN 60068-2-27
Vibration resistance	Test for transport applications, strength class 2 according to FN 942017-4 and EN 60068-2-6

Material information

Shell frame	Refined aluminum alloy
Sealing performance	HNBR, NBR
Material description	RoHS Compliant

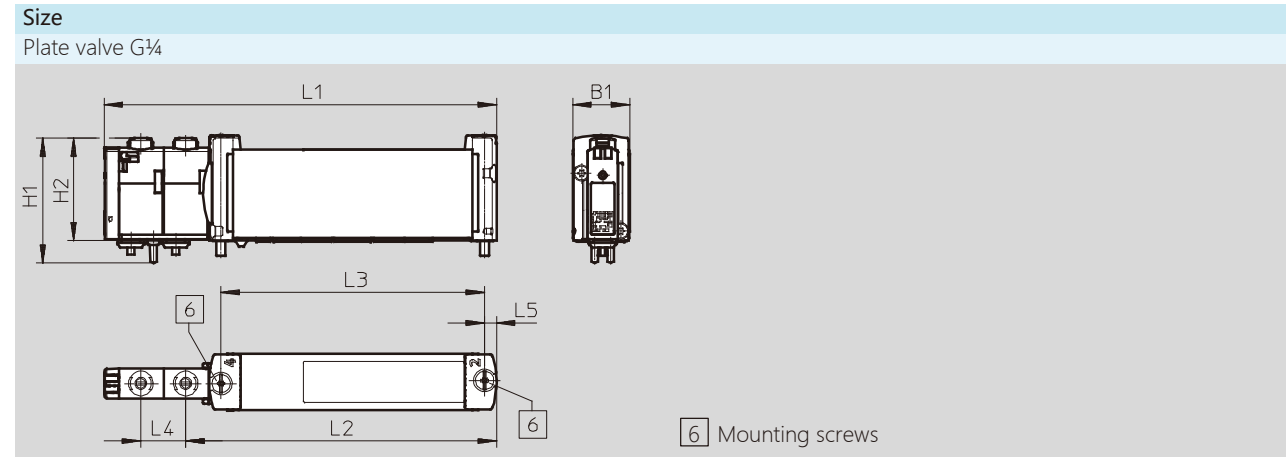
Valve switching time

Valve function	T32-A ¹⁾	T32-M ²⁾	M52-A	B52	M52-M ²⁾	P53
Switch time, on [ms]	15	25	20	-	13	20
Switch time, off [ms]	35	33	35	-	50	57
Conversion time [ms]	-	-	-	15	-	31

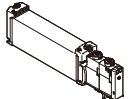
- 1) Pneumatic reset
 2) Mechanical spring return

Valve terminal FV , with multi-pin plug and fieldbus connection

Technical specifications - Plate valve G $\frac{1}{4}$

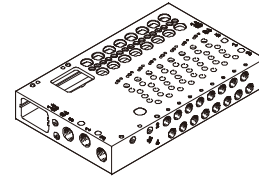


Type	B1	H1	H2	L1	L2	L3	L4	L5
FAS-B18-...	18.7	40.9	33.6	128.6	101.9	86.4	14.7	3.9

Ordering data				
Illustrate	Order NO.	Type		
Plate valve G $\frac{1}{4}$				
				
2x2-position 3-way valve				
External, pilot pneumatic source	Normally closed, reset method: Pneumatic reset	8180111140	FAS-B18-T32C-AZ	
	Normally open, reset method: Pneumatic reset	8180211140	FAS-B18-T32U-AZ	
	1x normally open, 1x normally closed, reset method: Pneumatic reset	8180311140	FAS-B18-T32H-AZ	
	Normally closed, reset method: Mechanical spring reset	8180112140	FAS-B18-T32C-MZ	
	Normally open, return mode: Mechanical spring return	8180212140	FAS-B18-T32U-MZ	
	1x normally open, 1x normally closed, return mode: Mechanical spring return	8180312140	FAS-B18-T32H-MZ	
2-position 5-way valve, Single electronic control				
External, pilot pneumatic source	Return mode: Pneumatic reset / Mechanical spring return	8180413140	FAS-B18-M52-RZ	
	Return mode: Mechanical spring return	8180412140	FAS-B18-M52-MZ	
2-position 5-way valve, Double electronic control				
External, pilot pneumatic source		8180510140	FAS-B18-B52-Z	
3-position 5-way valve				
External, pilot pneumatic source	Mid-position closed	8180610140	FAS-B18-P53C-Z	
	Mid-position pressurised	8180710140	FAS-B18-P53U-Z	
	Mid-position exhausted	8180810140	FAS-B18-P53E-Z	

Valve terminal FV , with multi-pin plug and fieldbus connection

Order data

Illustrate	Order NO.	Type		
Manifold sub-base for sub-base valves				
				
For valve size M5				
Pneumatic ports 2, 4 at the front end	4 valve positions	1573434	FAS-L1-10W-G18-4-GR	
	5 valve positions	1573435	FAS-L1-10W-G18-5-GR	
	6 valve positions	1573436	FAS-L1-10W-G18-6-GR	
	7 valve positions	1573437	FAS-L1-10W-G18-7-GR	
	8 valve positions	1573438	FAS-L1-10W-G18-8-GR	
	9 valve positions	1573439	FAS-L1-10W-G18-9-GR	
	10 valve positions	1573440	FAS-L1-10W-G18-10-GR	
	12 valve positions	1573441	FAS-L1-10W-G18-12-GR	
	16 valve positions	1573442	FAS-L1-10W-G18-16-GR	
	20 valve positions	1573443	FAS-L1-10W-G18-20-GR	
	24 valve positions	1573444	FAS-L1-10W-G18-24-GR	
	For valve size G$\frac{1}{8}$			
Pneumatic ports 2, 4 at the front end	4 valve positions	1573500	FAS-L1-14W-G14-4-GR	
	5 valve positions	1573501	FAS-L1-14W-G14-5-GR	
	6 valve positions	1573502	FAS-L1-14W-G14-6-GR	
	7 valve positions	1573503	FAS-L1-14W-G14-7-GR	
	8 valve positions	1573504	FAS-L1-14W-G14-8-GR	
	9 valve positions	1573505	FAS-L1-14W-G14-9-GR	
	10 valve positions	1573506	FAS-L1-14W-G14-10-GR	
	12 valve positions	1573507	FAS-L1-14W-G14-12-GR	
	16 valve positions	1573508	FAS-L1-14W-G14-16-GR	
	20 valve positions	1573509	FAS-L1-14W-G14-20-GR	
	24 valve positions	1573510	FAS-L1-14W-G14-24-GR	
	For valve size G$\frac{1}{4}$			
Pneumatic ports 2, 4 at the front end	4 valve positions	1504913	FAS-L1-18W-G38-4-GR	
	5 valve positions	1504914	FAS-L1-18W-G38-5-GR	
	6 valve positions	1504915	FAS-L1-18W-G38-6-GR	
	7 valve positions	1504916	FAS-L1-18W-G38-7-GR	
	8 valve positions	1504917	FAS-L1-18W-G38-8-GR	
	9 valve positions	1504918	FAS-L1-18W-G38-9-GR	
	10 valve positions	1504919	FAS-L1-18W-G38-10-GR	
	12 valve positions	1504920	FAS-L1-18W-G38-12-GR	
	16 valve positions	1504921	FAS-L1-18W-G38-16-GR	
	20 valve positions	1504922	FAS-L1-18W-G38-20-GR	
	24 valve positions	1504923	FAS-L1-18W-G38-24-GR	

Valve terminal FV , with multi-pin plug connection

Technical Specifications - Multi-pin plug connection

The following multi-pin connections are used for valve terminal FV:

- D-Sub (25 Pin)
- D-Sub (44 Pin)



Electrical multi-pin plug

Each pin on a multi-pin plug can drive a solenoid coil.

If up to 16 valve positions can be configured, this means that up to 32 valve coils can be assigned addresses.

- - Note:

A double electric valve occupies one valve position and two pins on the multi-pin plug. This means that there is a limited number of dual electronically controlled valves per manifold.

Main technical parameters

Pin	25 Pin	44 Pin
Electrical connections	D-SUB plug	
Maximum number of valves	16	
Protection class according to EN 60529	IP44	
Material	PA	
Material Precautions	RoHS Compliant	
CE marking (see declaration of conformity)	Compliant with EU EMC guidelines	
Corrosion resistance grade CRC	2	
Weight [g]	53	

Order data, multi-pin plug connection

Illustrate	Order NO.	Type		
Electrical Interface, Sub D				
	25 Pin	For derivation M1-25		
		For derivation M1-25V1		
		For derivation M1-25V2		
		For derivation M1-25V3		
	44 Pin	For derivation M1-44		
Connecting cable; for multi-pin plugs				
	Sub-D socket, in-line	• 25-pin, up to 24 coils, IP40		
		• Cable ends open, 25 wires		
		• 44 pins, up to 32 coils, IP40		
		• Cable ends open		
		Cable length 2.5 m	575417	NEBV-S1G25-K-2.5-N-LE25-S6
		Cable length 5 m	575418	NEBV-S1G25-K-5-N-LE25-S6
		Cable length 10 m	575419	NEBV-S1G25-K-10-N-LE25-S6
		Cable length 2.5 m	575113	NEBV-S1G44-K-2.5-N-LE44-S6
		Cable length 5 m	575114	NEBV-S1G44-K-5-N-LE44-S6
		Cable length 10 m	575115	NEBV-S1G44-K-10-N-LE44-S6

Valve terminal FV , with multi-pin plug connection

Technical Specifications - Multi-pin plug connection

Pin assignment one D-Sub plug, 25 Pin							Pin assignment one D-Sub plug, 44 Pin		
Pin	Wire color ¹⁾	M1-25 12xDouble electric control,	M1-25 V1 12xDouble electric control,	M1-25 V2 Single solenoid,	M1-25 V3 Single solenoid,	Pin	Wire color ¹⁾	M1-44 16xDouble electric control,	
1	WH	VP0 14	VP0 14	VP0 14	VP0 14	1	WH	VP0 14	
2	BN	VP0 12	VP0 12	VP1 14	VP1 14	2	BN	VP0 12	
3	GN	VP1 14	VP1 14	VP2 14	VP2 14	3	GN	VP1 14	
4	YE	VP1 12	VP1 12	VP3 14	VP3 14	4	YE	VP1 12	
5	GY	VP2 14	VP2 14	VP4 14	VP4 14	5	GY	VP2 14	
6	PK	VP2 12	VP2 12	VP5 14	VP5 14	6	PK	VP2 12	
7	BU	VP3 14	VP3 14	VP6 14	VP6 14	7	BU	VP3 14	
8	RD	VP3 12	VP3 12	VP7 14	VP7 14	8	RD	VP3 12	
9	BK	VP4 14	VP4 14	VP8 14	VP8 14	9	BK	VP4 14	
10	VT	VP4 12	VP4 12	VP9 14	VP9 14	10	VT	VP4 12	
11	GY PK	VP5 14	VP5 14	VP10 14	VP10 14	11	GY PK	VP5 14	
12	RD BU	VP5 12	VP5 12	VP11 14	VP11 14	12	RD BU	VP5 12	
13	GN WH	VP6 14	Com	VP12 14	Com	13	GN WH	VP6 14	
14	BN GN	VP6 12	VP6 14	VP13 14	VP12 14	14	BN GN	VP6 12	
15	YE WH	VP7 14	VP6 12	VP14 14	VP13 14	15	YE WH	VP7 14	
16	BN YE	VP7 12	VP7 14	VP15 14	VP14 14	16	BN YE	VP7 12	
17	GY WH	VP8 14	VP7 12	VP16 14	VP15 14	17	GY WH	VP8 14	
18	BN GY	VP8 12	VP8 14	VP17 14	VP16 14	18	BN GY	VP8 12	
19	WH PK	VP9 14	VP8 12	VP18 14	VP17 14	19	WH PK	VP9 14	
20	BN PK	VP9 12	VP9 14	VP19 14	VP18 14	20	BN PK	VP9 12	
21	BU WH	VP10 14	VP9 12	VP20 14	VP19 14	21	BU WH	VP10 14	
22	BN BU	VP10 12	VP10 14	VP21 14	VP20 14	22	BN BU	VP10 12	
23	RD WH	VP11 14	VP10 12	VP22 14	VP21 14	23	RD WH	VP11 14	
24	BN RD	VP11 12	VP11 14	VP23 14	VP22 14	24	BN RD	VP11 12	
25	BK WH	Com	VP11 12	Com	VP23 14	25	BK WH	VP12 14	
-						26	BK BN	VP12 12	
-						27	GN GY	VP13 14	
-						28	YE GY	VP13 12	
-						29	GN PK	VP14 14	
-						30	YE PK	VP14 12	
-						31	GN BU	VP15 14	
-						32	YE BU	VP15 12	
-						33			
-						34			
-						35			
-						36			
-						37			
-						38			
-						39			
-						40			
-						41			
-						42			
-						43	RD GN	Com	
-						44	RD YE		

VP Valve position

Valve terminal FV, IO-Link Technical parameters – IO-Link



IO-Link

Type:

- Ethernet interface for fieldbus nodes (CTEU)
- IO-Link mode for direct connection to a higher-level IO-Link master

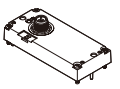
Power/data transfer via an M12 plug.

The valve island can be configured with 4-24 valves ((double electric control).

Main technical parameters

The type of communication		IO-Link	
Electrical connection		<ul style="list-style-type: none"> • M12 Plug, 5 Pin • A code 	
Baud rate	COM3	[kbps]	230.4
	COM2	[kbps]	38.4
Inherent power consumption, logic power supply PS		[mA]	30
Inherent power consumption, valve power supply PL		[mA]	30
Number of valve digits	FAS-L1-S-8-PT-CS		8
	FAS-L1-S-16-PT-CS		16
	FAS-L1-S-24-PT-CS		24
Ambient temperature		[°C]	-5-50
Product weight	Output at the top	[g]	49
	Output on the side	[g]	100
Protection class according to EN 60529		IP67	
Certification		c UL us - Certification (OL) c CSA us (OL)	
CE marking (see declaration of conformity)		Conforms to EU EMC guidelines ¹⁾	
Corrosion resistance grade CRC ²⁾		2	

Ordering data

	Illustrate	Order NO.	Type
Electrical interface, For I-Port interface/IO-Link, at the top			
	Drive up to 8 double electronically controlled valve positions	00BW34	FAS-L1-S-8-PT-CS
	Drive up to 16 double electronically controlled valve positions	00BW32	FAS-L1-S-16-PT-CS
	Drive up to 24 double electronically controlled valve positions	00BW31	FAS-L1-S-24-PT-CS

Valve terminal FV, Ethernet interface Technical parameters - Ethernet interface



Ethernet connection

Type:

- Ethernet interface for fieldbus nodes (CTEU)

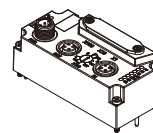
Power/data transmission via an M12 plug.

The valve terminal can be equipped with 4-24 valves (double electric control).

Main technical parameters







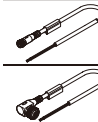
The type of communication		Ethernet	
Electrical connection		<ul style="list-style-type: none"> • M12 Plug, 4-pin • D code • Metal thread for shielding 	
Baud rate	COM1	[Mbps]	100
	COM2	[Mbps]	100
Inherent power consumption, logic power supply PS		[mA]	30
Inherent power consumption, valve power supply PL		[mA]	30
Number of valve digits support for Profinet, Ethernet/IP, EtherCAT, CC-link IEFB, Profibus-DP, Modbus-RTU	FAS-CTEU-MPL-8/16/24		8/16/24
	FAS-CTEU-ECT-8/16/24		
	FAS-CTEU-PBS-8/16/24		
	FAS-CTEU-MBR-8/16/24		
Ambient temperature		[°C]	-5 -50
Product weight	The output is at the top	[g]	49
	The output is sideways	[g]	100
Degree of protection in accordance with EN 60529		IP67	
Certification		c UL us - Certification (OL) c CSA us (OL)	
CE marking (see declaration of conformity)		Conforms to EU EMC guidelines ¹⁾	
Corrosion resistance grade CRC ²⁾		2	

Ordering data – CTEU

	Illustrate	Order NO.	Type
Bus node			
	Support Profinet, Ethernet/IP, EtherCAT, CC-Link IEFB communication protocol, drive up to 8/16/24 double electric control valves	008F14/12/11	FAS-CTEU-MPL-8/16/24
	Support EtherCAT communication protocol, drive up to 8/16/24 double electric control valves	008F64/62/61	FAS-CTEU-ECT-8/16/24
	Support Profibus-DP communication protocol, drive up to 8/16/24 double electric control valves	008F44/42/41	FAS-CTEU-PBS-8/16/24
	Support Modbus-RTU communication protocol, drive up to 8/16/24 double electric control valves	008F24/22/21	FAS-CTEU-MBR-8/16/24

Order data						
	Illustrate		Order NO.	PU ¹⁾		
Straight head muffler						
	For M5 threads		UC-M5	1		
	For G ¹ / ₈ threads		UC-1/8	1		
	For G ¹ / ₄ threads		UC-1/4	1		
	For G ³ / ₈ threads		UC-3/8	1		
Plastic muffler						
	For M5 threads		U-M5	1		
	For G ¹ / ₈ threads		U-1/8	1		
	For G ¹ / ₄ threads		U-1/4	1		
	For G ³ / ₈ threads		U-3/8	1		
Main Inlet Threaded Quick Plug Fittings, In-Line						
	G ¹ / ₈ threads	For trachea Ø 6 mm	-	QS-G1/8-6	1	
		For trachea Ø 8 mm	-	QS-G1/8-8	1	
		For trachea Ø 10 mm	-	QS-G1/8-10	1	
		For trachea Ø 12 mm	-	QS-G1/8-12	1	
	G ¹ / ₄ threads	For trachea Ø 6 mm	-	QS-G1/4-6	1	
		For trachea Ø 8 mm	-	QS-G1/4-8	1	
		For trachea Ø 10 mm	-	QS-G1/4-10	1	
		For trachea Ø 12 mm	-	QS-G1/4-12	1	
	G ³ / ₈ threads	For trachea Ø 10 mm	-	QS-G3/8-10	1	
		For trachea Ø 12 mm	-	QS-G3/8-12	1	
		Main Inlet Threaded Quick Plug Fittings, In-Line				
			G ¹ / ₈ threads	For trachea Ø 6 mm	-	QSL-G1/8-6
For trachea Ø 8 mm	-			QSL-G1/8-8	1	
For trachea Ø 10 mm	-			QSL-G1/8-10	1	
For trachea Ø 12 mm	-			QSL-G1/8-12	1	
G ¹ / ₄ threads	For trachea Ø 6 mm		-	QSL-G1/4-6	1	
	For trachea Ø 8 mm		-	QSL-G1/4-8	1	
	For trachea Ø 10 mm		-	QSL-G1/4-10	1	
	For trachea Ø 12 mm		-	QSL-G1/4-12	1	
G ³ / ₈ threads	For trachea Ø 10 mm		-	QSL-G3/8-10	1	
	For trachea Ø 12 mm		-	QSL-G3/8-12	1	
	Plug					
			For M5 threads		B-M5	1
For G ¹ / ₈ threads			B-1/8	1		
For G ¹ / ₄ threads			B-1/4	1		
For G ³ / ₈ threads			B-3/8	1		

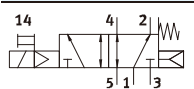
1) Packaging unit.

Order data					
	Illustrate		Order NO.	PU ¹⁾	
Push-in fittings with thread, in-line					
	M5 threads	For trachea Ø 4 mm	-	QSM-M5-4	1
		For trachea Ø 6 mm	-	QSM-M5-6	1
	P ¹ / ₈ threads	For trachea Ø 4 mm	-	QS-P(G)1/8-4	1
		For trachea Ø 6 mm	-	QS-P(G)1/8-6	1
		For trachea Ø 8 mm	-	QS-P1/8-8	1
		For trachea Ø 10 mm	-	QS-P1/8-10	1
	P ¹ / ₄ threads	For trachea Ø 6 mm	-	QS-P(G)1/4-6	1
		For trachea Ø 8 mm	-	QS-P1/4-8	1
		For trachea Ø 10 mm	-	QS-P1/4-10	1
		For trachea Ø 12 mm	-	QS-P1/4-12	1
	P ³ / ₈ threads	For trachea Ø 8 mm	-	QS-P3/8-8	1
		For trachea Ø 10 mm	-	QS-P3/8-10	1
For trachea Ø 12 mm		-	QS-P3/8-12	1	
For trachea Ø 16 mm		-	QS-P3/8-16	1	
Threaded quick plug connector, right angle					
	M5 threads	For trachea Ø 4 mm	-	QSML-M5-4	1
	P ¹ / ₈ threads	For trachea Ø 6 mm	-	QSL-P1/8-6	1
		For trachea Ø 8 mm	-	QSL-P1/8-8	1
Threaded Push Coupling, Extended, Right Angle					
	M5 threads	For trachea Ø 4 mm	-	QSMLL-M5-4	1
	P ¹ / ₈ threads	For trachea Ø 6 mm	-	QSLL-P1/8-6	1
		For trachea Ø 8 mm	-	QSLL-P1/8-8	1
Blind plate					
	vacancy width 10 mm	573422	VABB-L1-10-T	1	
	vacancy width 14 mm	573488	VABB-L1-14-T	1	
	vacancy width 18 mm	8004897	VABB-L1-18-T	1	
Pneumatic source board					
	Pneumatic supply ports 1, 3, 5, width 10 mm	573924	FAS-L1-10-P3A4-M7-T1	1	
	Pneumatic supply ports 1, 3, 5, width 14 mm	573925	FAS-L1-14-P3A4-G18-T1	1	
	Pneumatic supply ports 1, 3, 5, width 18 mm	8004898	FAS-L1-18-P3A4-G14-T1	1	
Spacer					
	For pneumatic circuit boards, size 10, M5	For plate valves	569994	VABD-6-B	1
	For all pneumatic strips, size 14, G1/8;		569996	VABD-10-B	1
	For all pneumatic strips, size 18, G1/4;		569997	VABD-12-B	1
Connection cable, open					
	M8 straight female, 3-pin	3m	63S023-030	M313-0000-10-001-VX8325-030	1
		5m	63S023-050	M313-0000-10-001-VX8325-050	1
	M8 right-angle female, 3-pin	3m	63S063-030	M323-0000-10-001-VX8325-030	1
		5m	63S063-050	M323-0000-10-001-VX8325-050	1

1) Packaging unit.






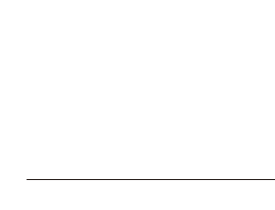
Wide body solenoid valve

Order number







FV-	-	A41	-	M52	3	-	-	C6	-	L5	-	D10	-	IOL
Series														
FV-														
Brand														
A41 AirTac 4V1														
A42 AirTac 4V2														
A43 AirTac 4V3														
Valve function														
 Single electronic control M52														
Single coil valve position														
1 1 valve positions														
2 2 valve positions														
⋮ Customizable (up to 16 valve positions)														
None No valve														
Valve fittings pipe														
None Fitting connector														
W No connector														
Electrical Interface														
T18 In-line terminal														
IOL IO-Link interface														
IOL-EV IOL output extension														
IOL-ES IOL input extension														
Main air intake														
S10 1↗φ10mm														
D10 2↗φ10mm														
S12 1↗φ12mm														
D12 2↗φ12mm														
No connector														
Reserved number														
L1 Reserve 1 place														
L2 Reserve 2 place														
⋮ Can be customized														
None No reservation														
Fitting pipe diameter														
C4 φ4mm														
C6 φ6mm														
C8 φ8mm														
C10 φ10mm														
None No valve														

Example: FV-A41-M523-C6-L5-D10-IOL (WH/KG)
 Indication: 3x2-position 5-way single coils, reserved 5 valve positions, IO-Link communication, total number of valve plates: 3+5=8. WH said: "Solenoid valve is not provided", KG said: "Customer provides solenoid valve".

Valve island, common kit combination

Order data		
Illustrate	Type	
In-line terminal + Manifold		
For 4V1 series, valve size G1/8		
 Push-in terminals, field wiring	8 valve positions	FV-A41-8-S12-T18
	10 valve positions	FV-A41-10-S12-T18
	12 valve positions	FV-A41-12-S12-T18
	16 valve positions	FV-A41-16-S12-T18
For 4V2 series valve size G1/4		
 Push-in terminals, field wiring	8 valve positions	FV-A42-8-S12-T18
	10 valve positions	FV-A42-10-S12-T18
	12 valve positions	FV-A42-12-S12-T18
	16 valve positions	FV-A42-16-S12-T18
For 4V3 series, valve size G3/8		
 Push-in terminals, field wiring	6 valve positions	FV-A43-6-S12-T18
	8 valve positions	FV-A43-8-S12-T18
	10 valve positions	FV-A43-10-S12-T18
	12 valve positions	FV-A43-12-S12-T18
IO-Link communication interface + Manifold		
For 4V1 series valve size G1/8		
 IO-Link communication interface	8 valve positions	FV-A41-8-S12-IOL
	10 valve positions	FV-A41-10-S12-IOL
	12 valve positions	FV-A41-12-S12-IOL
For 4V2 series, valve size G1/4		
 IO-Link communication interface	8 valve positions	FV-A42-8-S12-IOL
	10 valve positions	FV-A42-10-S12-IOL
	12 valve positions	FV-A42-12-S12-IOL
	16 valve positions	FV-A42-16-S12-IOL
For 4V3 series valve size G3/8		
 IO-Link communication interface	6 valve positions	FV-A43-6-S12-IOL
	8 valve positions	FV-A43-8-S12-IOL
	10 valve positions	FV-A43-10-S12-IOL
	12 valve positions	FV-A43-12-S12-IOL

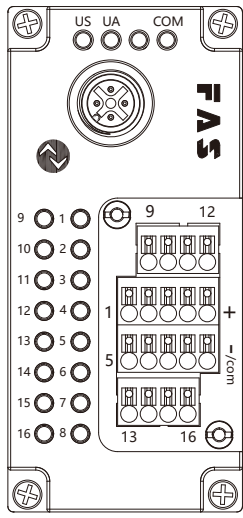
Valve island, common kit combination

Order data			
Illustrate			Type
IO-Link communication interface + Manifold + Output expansion valve plate			
For 4V1 series valve size G1/8			
	IO-Link communication interface, in-line terminal	8 valve positions	FV-A41-8-S12-IOL-EV
		10 valve positions	FV-A41-10-S12-IOL-EV
		12 valve positions	FV-A41-12-S12-IOL-EV
For 4V2 series, valve size G1/4			
	IO-Link communication interface, in-line terminal	8 valve positions	FV-A42-8-S12-IOL-EV
		10 valve positions	FV-A42-10-S12-IOL-EV
		12 valve positions	FV-A42-12-S12-IOL-EV
For 4V3 series valve size G3/8			
	IO-Link communication interface, in-line terminal	8 valve positions	FV-A43-8-S12-IOL-EV
		10 valve positions	FV-A43-10-S12-IOL-EV
		12 valve positions	FV-A43-12-S12-IOL-EV
IO-Link communication interface expansion + Manifold + Input expansion distributor (up to 16 inputs)			
For 4V1 series, valve size G1/8			
	Air ports 2, 4 on the valve	8 valve positions	FV-A41-8-S12-IOL-ES
	IO-Link communication interface	10 valve positions	FV-A41-10-S12-IOL-ES
	12 double coils	12 valve positions	FV-A41-12-S12-IOL-ES
For 4V2 series, valve size G1/4			
	Air ports 2, 4 on the valve	8 valve positions	FV-A42-8-S12-IOL-ES
	IO-Link communication interface	10 valve positions	FV-A42-10-S12-IOL-ES
	12 double coils	12 valve positions	FV-A42-12-S12-IOL-ES
For 4V3 series valve size G3/8			
	Air ports 2, 4 on the valve	8 valve positions	FV-A43-8-S12-IOL-ES
	IO-Link communication interface	10 valve positions	FV-A43-10-S12-IOL-ES
	12 double coils	12 valve positions	FV-A43-12-S12-IOL-ES


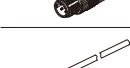

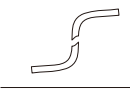
Valve terminal, accessories

The following are used for valve terminals:



Pin assignment						
	Terminal	Wire color	18-bit terminal		IO-Link	
			FNI-4V-V16 16-Way single electronic control ①	FNI-4V-IOL 16-Way single electronic control ②	FNI-4V-IOL-EV 12DO+12DO (Double electronic control) ③	FNI-4V-IOL-ES 12DO+16DI (single electronic control) ③
	1	White	VP0		VP0	SR1
	2	Green	VP1		VP1	SR2
	3	Yellow	VP2		VP2	SR3
	4	Gray	VP3		VP3	SR4
	5	Pink	VP4		VP4	SR5
	6	Red	VP5		VP5	SR6
	7	Black	VP6		VP6	SR7
	8	Purple	VP7		VP7	SR8
	9	Gray pink	VP8		VP8	SR9
	10	Red blue	VP9		VP9	SR10
	11	White green	VP10		VP10	SR11
	12	Brown green	VP11		VP11	SR12
	13	White yellow	VP12			SR13
	14	Brown yellow	VP13			SR14
	15	White gray	VP14			SR15
	16	Brown gray	VP15			SR16
	+	Brown				
	- Com	Blue				

VP Valve position
SR Input signal Example: magnetic open

Order data– plug connection						
	Illustrate		Order NO.	→Page (see details)		
Connecting cable, plug						
	M8 plug	• 3 Pin, can connect 1 signal	Push-in	63F341	1.3.11	
		M12 plug	• 4 Pin, can connect 2 signals	Push-in	64FY21	1.3.15
			• 4 Pin, IO-Link communication	Push-in	64F841	1.3.13
	M12 Plug cable	• M12, 4 hole, -IO-Link communication	Cable length 2.5 m	64S143-025	5.2.20	
			Cable length 5 m	64S143-050	5.2.20	
			Cable length 10 m	64S143-100	5.2.20	
	Cable	• 4*0.34, -For sensor or communication	Cable length 50 m	VX8434-500	1.0.03	
			• 10*0.25, -For valve block	Cable length 50 m	8VXA-500	1.0.04
			• 18*0.25, -For junction boxes	Cable length 50 m	8VXK-500	1.0.04

Order number










FV-	A41	B52	1	M52	1		C4	L1	S10	M1-25
Series										
FV-										
Brand										
A41 AirTac 4V1										
A42 AirTac 4V2										
A43 AirTac 4V3										
A51 AirTac 5V1										
A52 AirTac 5V2										
Valve function										
	Single electronic control	M52								
	Double electronic control	B52								
	Mid-position closed	53C								
	Mid-position pressurised	53P								
	Mid-position exhausted	53E								
	No valve	None								
Double coil valve position										
1	1 valve positions									
2	2 valve positions									
:	Customizable (up to 16 valve positions)									
None	No valve									
Electrical interface										
M1-25	Double electronic control COM 25									
M1-25V1	Double electronic control COM 13									
M1-25V2	Single electronic control COM 25									
M1-25V3	Single electronic control COM 13									
M1-44	Double electronic control COM 50									
IOL	IO-Link interface (7V)									
MPL	Multi-protocol interface									
MBR	Modbus-RTU									
PBS	Profibus-DP									
Main air intake										
S10	1↑φ10mm									
D10	2↑φ10mm									
S12	1↑φ12mm									
D12	2↑φ12mm									
None	No connector									
Reserved number										
L1	Reserve 1 place									
L2	Reserve 2 place									
:	Can be customized									
None	No reservation									
Fitting pipe diameter										
C4	φ4mm									
C6	φ6mm									
C8	φ8mm									
C10	φ10mm									
None	No valve									
Valve fittings pipe										
None	Fitting connector									
W	No connector									
Single coil valve position										
1	1 valve positions									
2	2 valve positions									
:	Customizable (up to 16 valve positions)									
None	No valve									

Example: : FV-A41-B523-M527-C6-L2-D10-IOL (WH/KG)
 Indication: 3x2-position 5-way dual coils, 7 2-position 5-way single coils, reserved 2 valve positions, IO-Link communication. The total number of valve plates: 3+7+2=12. WH said: "Solenoid valves are not provided", KG said: "Solenoid valves are provided by customers".

Order data		
Illustrate		Type
Multi-protocol module + Manifold		
For 4V2 series, valve size G1/4		
	Support multiple communication protocols:	8 valve positions
	Profinet	10 valve positions
	Ethernet/IP	12 valve positions
	EtherCAT CC-Link IEFB	16 valve positions
For 4V3 series valve size G3/8		
	Support multiple communication protocols:	6 valve positions
	Profinet	8 valve positions
	Ethernet/IP	10 valve positions
	EtherCAT CC-Link IEFB	12 valve positions
Multi-pin plug connection + Manifold		
For 4V2 series valve size G1/4		
	Multi-pin plug connection	8 valve positions
		10 valve positions
		12 valve positions
		16 valve positions
For 4V3 series valve size G3/8		
	Multi-pin plug connection	6 valve positions
		8 valve positions
		10 valve positions
		12 valve positions
Modbus-RTU protocol module + Manifold		
For 4V2 series, valve size G1/4		
	Support Modbus-RTU communication protocol	8 valve positions
		10 valve positions
		12 valve positions
		16 valve positions
For 4V3 series, valve size G3/8		
	Support Modbus-RTU communication protocol	6 valve positions
		8 valve positions
		10 valve positions
		12 valve positions

Valve terminal with multi-pin plug and fieldbus connection

Technical parameters

-  - Valve width 18 mm
-  - Valve width 22mm
-  - Valve width 27mm
-  - Flow 900 ... 1200 l/min
-  - Flow 1200 ... 1700 l/min
-  - Flow 1700 ... 2500 l/min
-  - Operating voltage 24 V DC
-  - Operating voltage 24 V DC
-  - Operating voltage 24 V DC



He main technical parameters			
Valve function	4V1	4V2	4V3
Reset method: Air reset		Yes	
Reset method: Mechanical spring return		Yes	
Port 1 vacuum operated	When external pilot is used		
Design	Piston slide valve		
Sealing principle	Soft		
Drive mode	Electric		
Control method	Pilot		
Pilot pneumatic source	External		
Exhaust function	With flow control		
Hand control device	Optional non-locking		
Installation method	Installed on the air circuit board		
Installation location	Arbitrary		
Switch position display	LED		
Air width	1,3,5,12/14,82/84	On the board	
	2,4	G $\frac{3}{4}$	
Product weight	[g] 175	320	400




Working and environmental conditions			
Valve function	20	10	30
Working medium	Compressed air according to ISO 8573-1:2010 [7:4:4]		
Pilot medium	Compressed air according to ISO 8573-1:2010 [7:4:4]		
Description of working medium/Pilot medium	Can be lubricated (once used, must always be lubricated)		
Work pressure	Inner pilot [bar] 1.5 ... 8	1.5 ... 8	3...8
	Outer pilot [bar] -0.9 ... 10	-0.9 ... 8	-0.9 ... 10
Pilot pressure ^{a)}	[bar] 1.5 ... 8	3...8	3...8
Ambient temperature	[°C] -5 ... +60		
Medium temperature	[°C] -5 ... +60		

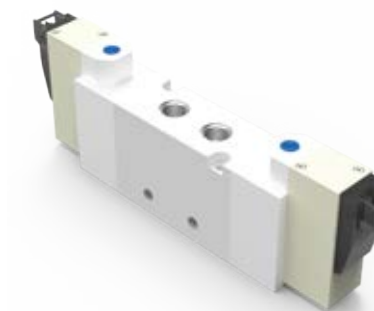
Electrical parameters	
Electrical connections	Via E-box
Working voltage	[V DC] 24 ±10%
Power consumption	[W] 1
Continuous energization rate ED	[%] 100
Maximum switching frequency	[Hz] 3
Degree of protection according to EN 60529	IP67

Valve switching time			
Valve function	20	10	30
Switch time on	[ms] -	13	20
Switch time, off	[ms] -	50	57
Conversion time	[ms] 15	-	31

Valve terminal with multi-pin plug and fieldbus connection

Technical parameters

-  - Valve width 22mm
-  - Flow 1200 ... 1700 l/min
-  - Operating voltage 24 V DC



He main technical parameters	
Valve function	5V2
Reset method: Air reset	Yes
Reset method: Mechanical spring return	Yes
Port 1 vacuum operated	When external pilot is used
Design	Piston slide valve
Sealing principle	Soft
Drive mode	Electric
Control method	Pilot
Pilot pneumatic source	External
Exhaust function	With flow control
Hand control device	Optional non-locking
Installation method	Installed on the air circuit board
Installation location	Arbitrary
Switch position display	LED
Air width	1,3,5,12/14,82/84
	2,4
Product weight	[g] 320

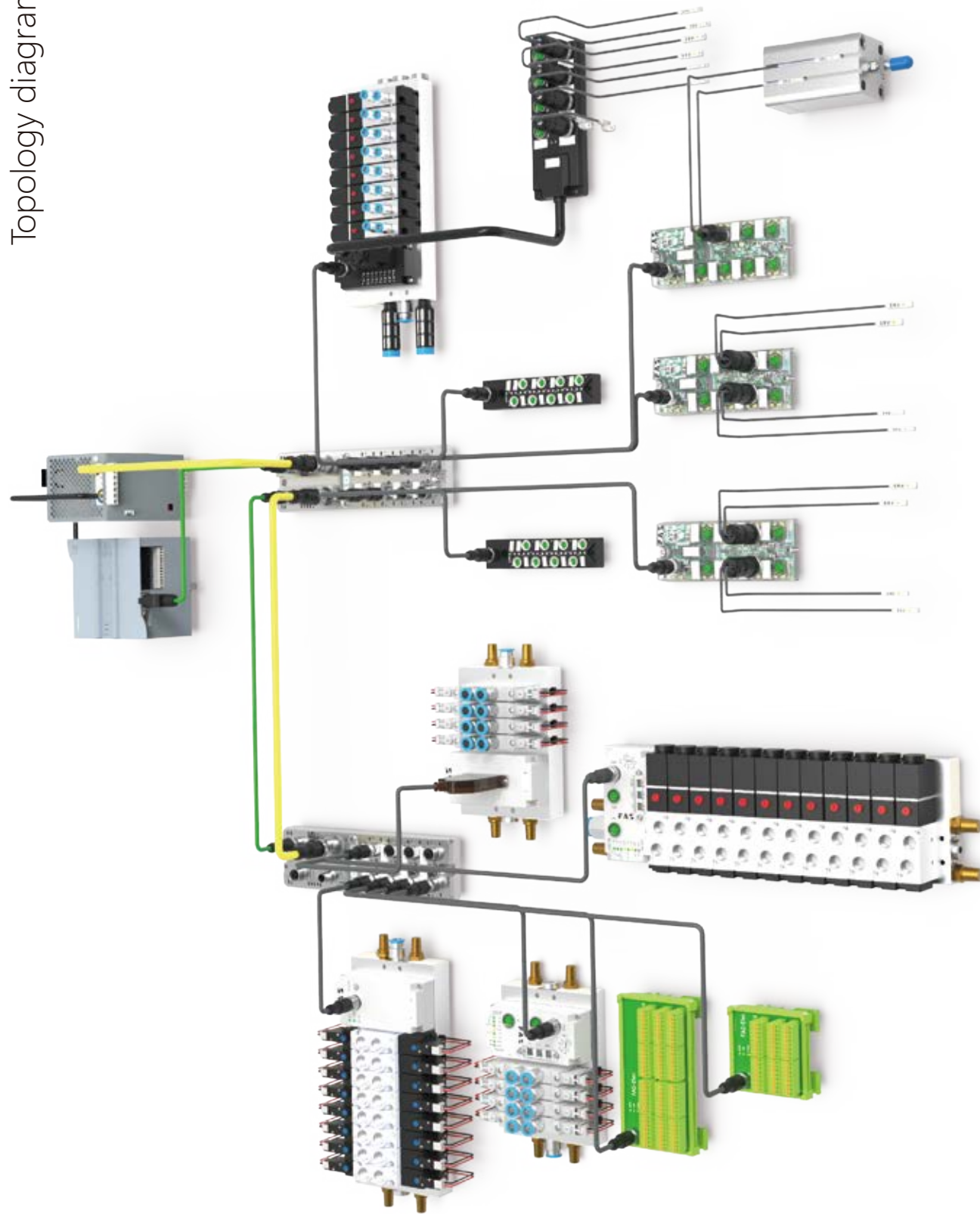
Working and environmental conditions			
Valve function	20	10	30
Working medium	Compressed air according to ISO 8573-1:2010 [7:4:4]		
Pilot medium	Compressed air according to ISO 8573-1:2010 [7:4:4]		
Description of working medium/Pilot medium	Can be lubricated (once used, must always be lubricated)		
Work pressure	Inner pilot [bar] 1.5 ... 8	1.5 ... 8	3...8
	Outer pilot [bar] -0.9 ... 10	-0.9 ... 8	-0.9 ... 10
Pilot pressure ^{a)}	[bar] 1.5 ... 8	3...8	3...8
Ambient temperature	[°C] -5 ... +60		
Medium temperature	[°C] -5 ... +60		

Electrical parameters	
Electrical connections	Via E-box
Working voltage	[V DC] 24 ±10%
Power consumption	[W] 1
Continuous energization rate ED	[%] 100
Maximum switching frequency	[Hz] 3
Degree of protection according to EN 60529	IP67

Valve switching time			
Valve function	20	10	30
Switch time on	[ms] -	13	20
Switch time, off	[ms] -	50	57
Conversion time	[ms] 15	-	31

Narrow body solenoid valve

Topology diagram



Valve island, common kit combination



Innovation

- ◆ Choice of internal pilot or external pilot air supply
- ◆ Maximum pressure 10 bar

Reliable

- ◆ Metal components are strong and durable
 - Valve
 - Pneumatic board
- ◆ 360° LED 360°LED full-angle visibility, can quickly troubleshoot
- ◆ Valves are quick and easy to replace for easy servicing

Multifunction

- ◆ Various valve functions
- ◆ Optional quick plug connector
- ◆ Tubular valves can be used as a single valve or as an integrated installation on the airway panel
- ◆ M7 tubular valve can be combined on a single airway plate

Easy to install

- ◆ Can be firmly installed on the wall or H-rail
- ◆ Easy installation with built-in screws and seals
- ◆ Label holder for identifying valves

Valve island, common kit combination

Order number

FV-	-	A71	-	B52	1	-	M52	1	-	-	-	C4	-	L1	-	S10	M1-25
Series																	
FV-																	
Brand																	
A75	AirTac 7V05																
A71	AirTac 7V1																
A72	AirTac 7V2																
A73	AirTac 7V3																
SY3	SMC SY3000																
SY5	SMC SY5000																
SY7	SMC SY7000																
SY9	SMC SY9000																
F10	FESTO VUVG L10																
F14	FESTO VUVG L14																
F18	FESTO VUVG L18																
C15	CKD 3GD2/4GD2																
Valve function																	
	Double electronic control 32C																
	Double electronic control 32P																
	Double electronic control 32E																
	Single electronic control M52																
	Double electronic control B52																
	Mid-position closed 53C																
	Mid-position pressurised 53P																
	Mid-position exhausted 53E																
	No valve None																
Double coil valve number																	
1	1 valve positions																
2	2 valve positions																
:	Customizable (up to 24 valve positions)																
None	No valve																
Electrical Interface																	
M1-25	Double electronic control COM 25																
M1-25V1	Double electronic control COM 13																
M1-25V2	Single solenoid COM 25																
M1-25V3	Single solenoid COM 13																
M1-44	Double electronic control COM 50																
IOL	IO-Link port																
MPL	Multi-protocol interface																
MBR	Modbus-RTU																
PBS	Profibus-DP																
Main air inlet diameter straight type (right angle type)																	
S8 (S8L)	1 pc φ8mm																
D8 (D8L)	2 pc φ8mm																
S10 (S10L)	1 pc φ10mm																
D10 (D10L)	2 pc φ10mm																
S12 (S12L)	1 pc φ12mm																
D12 (D12L)	2 pc φ12mm																
S16 (S16L)	1 pc φ16mm																
D16 (D16L)	2 pc φ16mm																
Reserved number																	
L1	Reserve 1 place																
L2	Reserve 2 place																
:	Customizable																
None	No reservation																
Connector Diameter, Straight (Right Angle)																	
C4 (C4L)	φ4mm																
C6 (C6L)	φ6mm																
C8 (C8L)	φ8mm																
C10 (C10L)	φ10mm																
Valve piping																	
None	With connector																
W	No connector																
Single coil valve position																	
1	1 valve positions																
2	2 valve positions																
:	Customizable (up to 24 valve positions)																
None	No valve																

Example: FV-L10-B523-M527-C6-L2-D10-IOL (WH/KG)
 Indication: width of 10mm, 3x2-position 5-way dual coils, 7 2-position 5-way single coils, reserved 2 valve positions, IO-Link communication, total number of valve plates: 3+7+2=12. WH said: "Does not contain solenoid valve", KG said: "Customer provides solenoid valve".

Valve island, common kit combination

Order data			
Illustrate			Type
IO-Link communication interface + Manifold			
	Applicable valve (see 2.2.03)		
	IO-Link communication interface	4 valve positions	FV-xxx-4-S12-IOL
		6 valve positions	FV-xxx-6-S12-IOL
		8 valve positions	FV-xxx-8-S12-IOL
		10 valve positions	FV-xxx-10-S12-IOL
		12 valve positions	FV-xxx-12-S12-IOL
16 valve positions		FV-xxx-16-S12-IOL	
	24 valve positions	FV-xxx-24-S12-IOL	
Multi-protocol module + Manifold			
	Applicable valves (see 2.2.03)		
	The MPL in the model number indicates that it supports a variety of communication protocols, refer to the following: Profinet---PNT Ethernet/IP---EIP EtherCAT---ECT CC-Link IEFB	4 valve positions	FV-xxx-4-S12-MPL
		6 valve positions	FV-xxx-6-S12-MPL
		8 valve positions	FV-xxx-8-S12-MPL
		10 valve positions	FV-xxx-10-S12-MPL
		12 valve positions	FV-xxx-12-S12-MPL
16 valve positions		FV-xxx-16-S12-MPL	
	24 valve positions	FV-xxx-24-S12-MPL	
Multi-pin plug connection + Manifold			
	Applicable valves (see 2.2.03)		
	Multi-pin plug connection	4 valve positions	FV-xxx-4-S12-25V2
		6 valve positions	FV-xxx-6-S12-25V2
		8 valve positions	FV-xxx-8-S12-25V2
		10 valve positions	FV-xxx-10-S12-25V2
		12 valve positions	FV-xxx-12-S12-25V2
16 valve positions		FV-xxx-16-S12-25V2	
	24 valve positions	FV-xxx-24-S12-25V2	
Modbus-RTU protocol module + Manifold			
	Applicable valves (see 2.2.03)		
	Support Modbus-RTU communication protocol	4 valve positions	FV-xxx-4-S12-MBR
		6 valve positions	FV-xxx-6-S12-MBR
		8 valve positions	FV-xxx-8-S12-MBR
		10 valve positions	FV-xxx-10-S12-MBR
		12 valve positions	FV-xxx-12-S12-MBR
16 valve positions		FV-xxx-16-S12-MBR	
	24 valve positions	FV-xxx-24-S12-MBR	




xxx: Indicates the valve brand specification, e.g. optional model FV-A75-4-S12-IOL

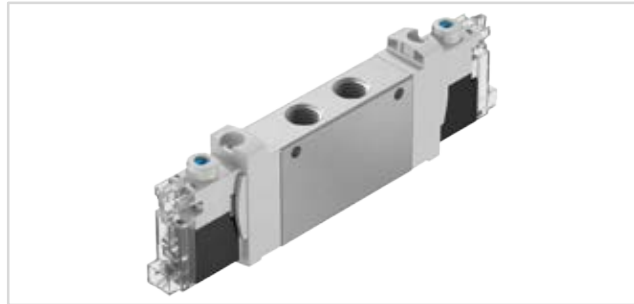
Solenoid valve FV-L10, tubular valve M7

Technical parameters

Function

2x3/2C, 2x3/2U, 2x3/2H
2-position 5-way valve,
single electric control
2-position 5-port valve,
double solenoid
5/3C, 5/3U, 5/3E

-  Valve width 10 mm
-  Flow
170 ... 340 l/min
-  Operating voltage
5, 12 and 24 V DC



Main technical parameters

Valve function	32-A			32-M			B52	M52	P53		
Normal position	C ¹⁾	P ²⁾	H ⁴⁾	C ¹⁾	P ²⁾	H ⁴⁾	-	-	C ¹⁾	P ²⁾	E ³⁾
Stable position	Single electric control						Double solenoid	Single electric control	Single electric control		
Reset method: Pneumatic reset	Yes			No			-	No	No		
Reset method: Mechanical spring return	No			Yes			-	Yes	Yes		
Port 1 vacuum operated	No			Only with external pilot							
Design	Piston slide valve										
Sealing principle	Soft										
Drive mode	Electric										
Control method	Pilot										
Pilot pneumatic source	Inside or outside										
Exhaust function	With flow control										
Installation location	Arbitrary										
Nominal diameter	[mm]	2.7	2.0	1.9	1.9		2.8	3.5			
Rated flow	[l/min]	190	150	140	140		320	320			
Flow on the airway panel	[l/min]	170	140	130	130		290	300			
Switching time on/Off	[ms]	6/16	8/11				8/24	10/30			
Conversion time	[ms]	-						7	16		
Valve width	[mm]	10									
Air width		1, 2, 3, 4, 5		M7							
		12/14		M3							
Product weight	[g]	55	54	55	44	55					

- 1) C=Normally off/Mid-position closed
2) P=Normally on/Mid-position pressurised
3) E=Mid-position exhausted
4) H=2x 2-position 3-way valve integrated in one shell, 1x normally closed and 1x normally open

Working and environmental conditions

Valve function	32-A ¹⁾		32-M ²⁾		B52	M52	P53
Working medium	Compressed air, according to ISO 8573-2010 [7:4:4]						
Work pressure	Inner Pilot	[bar]	1.5 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8	
	Outer pilot	[bar]	1.5 ... 10	-0.9 ... 10		-0.9 ... 8	-0.9 ... 10
Pilot pressure ⁴⁾	[bar]	1.5 ... 8	2 ... 8	1.5 ... 8	3 ... 8	3 ... 8	
Ambient temperature	[°C]	-5 ... +50, -5 ... +60, With reduced hold current function					
Medium temperature	[°C]	-5 ... +50, -5 ... +60, With reduced hold current function					

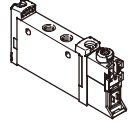
- 1) Pneumatic reset
2) Mechanical spring return

Electrical parameters

Working voltage	[V DC]	5, 12, 24 ±10%
Power	[W]	1, reduced to 0.35 by reducing the hold current function
Continuous energization rate ED	[%]	100
Degree of protection according to EN 60529		IP40 (with socket), IP65 (for M8)

Solenoid valve FV-L10, tubular valve M7

Order data




Illustrate	Order NO.	Type	
Tube valve M7			
2x2-position valve			
	Normally closed, reset method: Pneumatic reset	566471	FV-L10-32C-AT-M7
	Normally open, reset method: Pneumatic reset	566472	FV-L10-32U-AT-M7
	1x normally open, 1x normally closed, reset method: Pneumatic reset	566473	FV-L10-32H-AT-M7
	Normally closed, reset method: Mechanical spring reset	574356	FV-L10-32C-MT-M7
	Normally open, reset method: Mechanical spring reset	574357	FV-L10-32U-MT-M7
	1x normally open, 1x normally closed, reset method: Mechanical spring return	574358	FV-L10-32H-MT-M7
Outer pilot	Normally closed, reset method: Pneumatic reset	566479	FV-L10-32C-AZT-M7
	Normally open, reset method: Pneumatic reset	566480	FV-L10-32U-AZT-M7
	1x normally open, 1x normally closed, reset method: Pneumatic reset	566481	FV-L10-32H-AZT-M7
	Normally closed, reset method: Mechanical spring reset	574360	FV-L10-32C-MZT-M7
	Normally open, reset method: Mechanical spring reset	574361	FV-L10-32U-MZT-M7
	Normally closed, reset method: Mechanical spring reset	574362	FV-L10-32H-MZT-M7
2-position 5-port valve, single electric control			
Inner pilot	Reset method: Mechanical spring reset	574359	FV-L10-M52-MT-M7
	Reset method: Pneumatic reset/ Mechanical spring reset	566474	FV-L10-M52-RT-M7
Outer pilot	Reset method: Mechanical spring reset	574363	FV-L10-M52-MZT-M7
	Reset method: Pneumatic reset/ Mechanical spring reset	566482	FV-L10-M52-RZT-M7
2-position 5-port valve, double solenoid			
Inner pilot	566475	FV-L10-B52-T-M7	
Outer pilot	566483	FV-L10-B52-ZT-M7	
3-position 5-port valve			
Inner pilot	Mid-position closed	566476	FV-L10-P53C-T-M7
	Mid-position exhausted	566477	FV-L10-P53E-T-M7
	Mid-position pressurised	566478	FV-L10-P53U-T-M7
Outer pilot	Mid-position closed	566484	FV-L10-P53C-ZT-M7
	Mid-position exhausted	566485	FV-L10-P53E-ZT-M7
	Mid-position pressurised	566486	FV-L10-P53U-ZT-M7

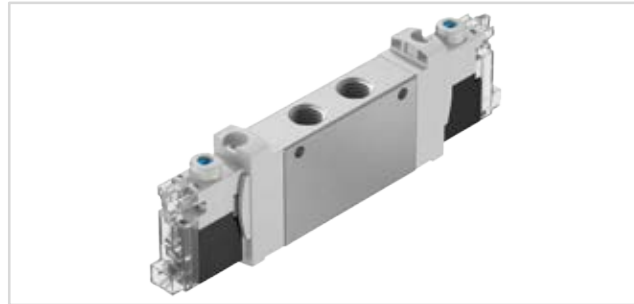
Solenoid valve FV-L14, in-line valve G $\frac{1}{8}$

Technical parameters

Function

2x3/2C, 2x3/2U, 2x3/2H
 2-position 5-way valve,
 single electric control
 2-position 5-port valve,
 double solenoid
 5/3C, 5/3U, 5/3E

-  Valve width 14 mm
-  Flow
480 ... 730 l/min
-  Operating voltage
5, 12 and 24 V DC



Main technical parameters

Valve function	32-A	32-M			M52	B52	P53				
Normal position	C ¹⁾ P ²⁾ H ⁴⁾ C ¹⁾ P ²⁾ C ¹⁾				-	-	C ¹⁾ P ²⁾ E ³⁾				
Stable position	Single electric control				Double solenoid						
Reset method: Pneumatic reset	Yes	No			Yes	-	No				
Reset method: Mechanical spring return	No	Yes			No	-	Yes				
Port 1 vacuum operated	No	Only with external pilot									
Design	Piston slide valve										
Sealing principle	Soft										
Drive mode	Electric										
Control method	Pilot										
Pilot pneumatic source	Inside or outside										
Exhaust function	With flow control										
Nominal diameter [mm]	4.6	4.3			5.6						
Rated flow [l/min]	650	600	650	550	500	500	730	780	650	600	
Flow on the airway panel [l/min]	620	580		520	480	480	680	730	620	580	
Switching time on/off [ms]	8/23		11/15			14/22		-	12/40		
Conversion time [ms]	-				8		20				
Valve width [mm]	14										
Port	1, 2, 3, 4, 5		G $\frac{1}{8}$			M5					
Product weight [g]	89		80			78		89		89	

- 1) C=Normally off/Mid-position closed
 2) P=Normally on/Mid-position pressurised
 3) E=Mid-position exhausted
 4) H=2x 2-position 3-way valve integrated in one shell, 1x normally closed and 1x normally open

Working and environmental conditions

Valve function	32-A ¹⁾	32-M ²⁾			M52 ¹⁾	B52	P53			
Working medium	Compressed air, according to ISO 8573-2010 [7:4:4]									
Work pressure	Inner Pilot [bar]	1.5 ... 8		3.5 ... 8		2.5 ... 8		1.5 ... 8		
	Outer pilot [bar]	1.5 ... 10		-0.9 ... 10			-0.9 ... 10			
Pilot pressure ³⁾ [bar]	1.5 ... 8		2 ... 8		2.5 ... 8		1.5 ... 8		3 ... 8	
Ambient temperature [°C]	-5 ... +50, -5 ... +60, With reduced hold current function									
Medium temperature [°C]	-5 ... +50, -5 ... +60, With reduced hold current function									

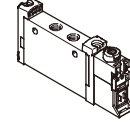
- 1) Pneumatic reset
 2) Mechanical spring return

Electrical parameters

Working voltage [V DC]	5, 12 and 24 ±10%	
Power [W]	1, reduced to 0.35 by reducing the hold current function	
Continuous energization rate ED [%]	100	
Degree of protection according to EN 60529	IP40 (with socket), IP65 (for M8)	

Solenoid valve FV-L14, in-line valve G $\frac{1}{8}$




Order data

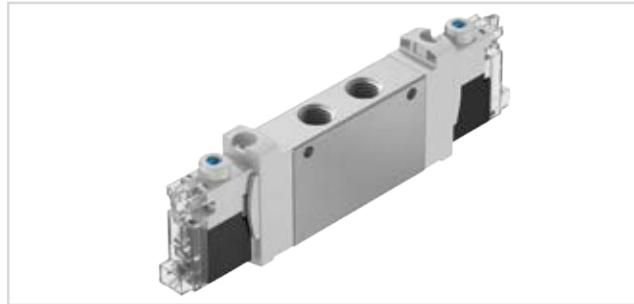
Illustrate	Order NO.	Type		
Tubular valve G $\frac{1}{8}$				
2x2-position 3-port valve				
	Inner pilot	Normally closed, reset method: Pneumatic reset	566496	FV-L14-32C-AT-G18
		Normally open, reset method: Pneumatic reset	566497	FV-L14-32U-AT-G18
		1x normally open, 1x normally closed, reset method: Pneumatic reset	566498	FV-L14-32H-AT-G18
		Normally closed, reset method: Mechanical spring reset	574368	FV-L14-32C-MT-G18
		Normally open, reset method: Mechanical spring reset	574369	FV-L14-32U-MT-G18
		1x normally open, 1x normally closed, reset method: Mechanical spring return	574370	FV-L14-32H-MT-G18
Outer pilot		Normally closed, reset method: Pneumatic reset	566505	FV-L14-32C-AZT-G18
		Normally open, reset method: Pneumatic reset	566506	FV-L14-32U-AZT-G18
		1x normally open, 1x normally closed, reset method: Pneumatic reset	566507	FV-L14-32H-AZT-G18
		Normally closed, reset method: Mechanical spring reset	574372	FV-L14-32C-MZT-G18
		Normally open, reset method: Mechanical spring reset	574373	FV-L14-32U-MZT-G18
		Normally closed, reset method: Mechanical spring reset	574374	FV-L14-32H-MZT-G18
2-position 5-port valve, single electric control				
Inner pilot	Reset method: Pneumatic reset	566499	FV-L14-M52-AT-G18	
Outer pilot	Pneumatic reset	566508	FV-L14-M52-AZT-G18	
2-position 5-port valve, double solenoid				
Inner pilot		566500	FV-L14-B52-T-G18	
Outer pilot		566509	FV-L14-B52-ZT-G18	
3-position 5-port valve				
Inner pilot	Mid-position closed	566501	FV-L14-P53C-T-G18	
	Mid-position exhausted	566502	FV-L14-P53E-T-G18	
	Mid-position pressurised	566503	FV-L14-P53U-T-G18	
Outer pilot	Mid-position closed	566510	FV-L14-P53C-ZT-G18	
	Mid-position exhausted	566511	FV-L14-P53E-ZT-G18	
	Mid-position pressurised	566512	FV-L14-P53U-ZT-G18	

Solenoid valve FV-L18, tubular valve G $\frac{1}{4}$

Technical parameters

Function

- 2x3/2C, 2x3/2U, 2x3/2H -  Valve width 18 mm
- 2-position 5-way valve, single electric control -  Flow 1000 ... 1380 l/min
- 2-position 5-port valve, double solenoid 5/3C, 5/3U, 5/3E -  Operating voltage 5, 12 and 24 V DC



Main technical parameters

Valve function	32-A	32-M	B52	M52	P53
Normal position	C ¹⁾ P ²⁾ H ⁴⁾	C ¹⁾ P ²⁾ H ⁴⁾	-	-	C ¹⁾ P ²⁾ E ³⁾
Stable position	Single electric control		Double solenoid	Single electric control	
Reset method: Pneumatic reset	Yes	No	-	No	No
Reset method: Mechanical spring return	No	Yes	-	Yes	Yes
Port 1 vacuum operated	No	Only with external pilot			
Design	Piston slide valve				
Sealing principle	Soft				
Drive mode	Electric				
Control method	Pilot				
Pilot pneumatic source	Inside or outside				
Exhaust function	With flow control				
Nominal diameter [mm]	5.7	7.3	6.9	6.5	6.3
Rated flow [l/min]	1000	1380	1300	1200	1000
Flow on the airway panel [l/min]	1000	1380	1300	1200	1000
Switching time on/Off [ms]	13/27	15/22	10/45	15/48	
Conversion time [ms]	-	11	-	29	
Valve width [mm]	18				
Port	1, 2, 3, 4, 5 12/14	G $\frac{1}{4}$ M5			
Product weight [g]	164	164	154	160	

- 1) C=Normally off/Mid-position closed
 2) P=Normally on/Mid-position pressurised
 3) E=Mid-position exhausted
 4) H=2x 2-position 3-way valve integrated in one shell, 1x normally closed and 1x normally open

Working and environmental conditions

Valve function	32-A ¹⁾	32-M ³⁾	B52	M52	P53
Working medium	Compressed air, according to ISO 8573-2010 [7:4:4]				
Work pressure	Inner pilot [bar] 1.5 ... 8	3...8	1.5 ... 8	3...8	
	Outer pilot [bar] 1.5 ... 10	-0.9 ... 10			
Pilot pressure ⁴⁾ [bar]	1.5 ... 8	2 ... 8	1.5 ... 8	3...8	
Ambient temperature [°C]	-5 ... +50, -5 ... +60, With reduced hold current function				
Medium temperature [°C]	-5 ... +50, -5 ... +60, With reduced hold current function				

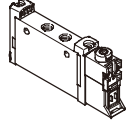
- 1) Pneumatic reset
 2) Mechanical spring return

Electrical parameters

Working voltage [V DC]	5, 12, 24 ±10%
Power [W]	1, Reduced to 0.35 by reducing the hold current function
Continuous energization rate ED [%]	100
Degree of protection according to EN 60529	IP40 (with socket), IP65 (for M8)

Solenoid valve FV-L18, tubular valve G $\frac{1}{4}$

Order data

Illustrate	Order NO.	Type
Pipe valve G $\frac{1}{4}$		
2x2-position 3-port valve		
	Normally closed, reset method: Pneumatic reset	574422 FV-L18-32C-AT-G14
	Normally open, reset method: Pneumatic reset	574423 FV-L18-32U-AT-G14
	1x normally open, 1x normally closed, reset method: Pneumatic reset	574424 FV-L18-32H-AT-G14
	Normally closed, reset method: Mechanical spring reset	574425 FV-L18-32C-MT-G14
	Normally open, reset method: Mechanical spring reset	574426 FV-L18-32U-MT-G14
	1x normally open, 1x normally closed, reset method: Mechanical spring return	574427 FV-L18-32H-MT-G14
Outer pilot	Normally closed, reset method: Mechanical spring reset	574434 FV-L18-32C-MZT-G14
	Normally open, reset method: Mechanical spring reset	574435 FV-L18-32U-MZT-G14
	Normally closed, reset method: Mechanical spring reset	574436 FV-L18-32H-MZT-G14
2-position 5-port valve, single electric control		
Inner pilot	Reset method: Pneumatic reset/ Mechanical spring reset	574428 FV-L18-M52-RT-G14
Outer pilot	External pilot, pneumatic return/ Mechanical spring return	574437 FV-L18-M52-RZT-G14
2-position 5-port valve, double solenoid		
Inner pilot		574430 FV-L18-B52-T-G14
Outer pilot		574439 FV-L18-B52-ZT-G14
3-position 5-port valve		
Inner pilot	Mid-position closed	574431 FV-L18-P53C-T-G14
	Mid-position exhausted	574432 FV-L18-P53E-T-G14
	Mid-position pressurised	574433 FV-L18-P53U-T-G14
Outer pilot	Mid-position closed	574440 FV-L18-P53C-ZT-G14
	Mid-position exhausted	574441 FV-L18-P53E-ZT-G14
	Mid-position pressurised	574442 FV-L18-P53U-ZT-G14

Valve terminal 7V with multi-pin plug connection

Technical Specifications - Multi-pin plug connection

The following multi-pin interfaces are used for valve terminals VTUG:

- Sub-D (25 Pin)
- Sub-D (44 Pin)



Electrical multi-pin plug

Each pin on the multi-pin plug can drive a solenoid.

If up to 16 valve positions can be configured, this means that up to 32 valve coils can be assigned addresses.

Notice
A double solenoid valve occupies one valve position and two pins on the multi-pin plug. This means a limited number of double solenoid valves per manifold.

Main technical parameters

Pin	25 Pin	44 Pin
Electrical connections	Sub-D plug	
Maximum valve positions	16	
Degree of protection, Compliance EN 60529	IP44	
Material	PA	
Material Precautions	Compliance RoHS	
CE Sign. (See declaration of conformity)	Compliance EU EMC	
Corrosion resistance level CRC	2	
Weight	[g]	53

Order data-Multi-pin plug connection

Illustrate	Order NO.	Type
	25 Pin	For sub-base variants M1-25
		For sub-base variants V1 M1-25
		For sub-base variants V2 M1-25
	44 Pin	For sub-base variants M1-44

Connecting cable for multi-pin plug

Sub-D socket, In-line	•25 Pin, max 24 coils, IP40 •Cable ends are free, 25wire	Cable length 2.5 m	575417	NEBV-S1G25-K-2.5-N-LE25-S6
		Cable length 5 m	575418	NEBV-S1G25-K-5-N-LE25-S6
		Cable length 10 m	575419	NEBV-S1G25-K-10-N-LE25-S6
	•44 Pin, max 32 coils, IP40 •Cable ends are free	Cable length 2.5 m	575113	NEBV-S1G44-K-2.5-N-LE44-S6
		Cable length 5 m	575114	NEBV-S1G44-K-5-N-LE44-S6
		Cable length 10 m	575115	NEBV-S1G44-K-10-N-LE44-S6

Valve terminal 7V with multi-pin plug connection

Technical Specifications - Multi-pin plug connection

Pin assignment - Sub-D plug, 25 Pin										Pin assignment - Sub-D plug, 44 Pin			
Pin	Wire color ¹⁾	M1-25 12xdouble solenoid,	M1-25 V1 12xdouble solenoid,	M1-25 V2 Single solenoid,	M1-25 V3 Single solenoid,	Pin	Wire color ¹⁾	M1-44 16x double solenoid					
1	WH	VP0 14	VP0 14	VP0 14	VP0 14	1	WH	VP0	14				
2	BN	VP0 12	VP0 12	VP1 14	VP1 14	2	BN	VP0	12				
3	GN	VP1 14	VP1 14	VP2 14	VP2 14	3	GN	VP1	14				
4	YE	VP1 12	VP1 12	VP3 14	VP3 14	4	YE	VP1	12				
5	GY	VP2 14	VP2 14	VP4 14	VP4 14	5	GY	VP2	14				
6	PK	VP2 12	VP2 12	VP5 14	VP5 14	6	PK	VP2	12				
7	BU	VP3 14	VP3 14	VP6 14	VP6 14	7	BU	VP3	14				
8	RD	VP3 12	VP3 12	VP7 14	VP7 14	8	RD	VP3	12				
9	BK	VP4 14	VP4 14	VP8 14	VP8 14	9	BK	VP4	14				
10	VT	VP4 12	VP4 12	VP9 14	VP9 14	10	VT	VP4	12				
11	GY PK	VP5 14	VP5 14	VP10 14	VP10 14	11	GY PK	VP5	14				
12	RD BU	VP5 12	VP5 12	VP11 14	VP11 14	12	RD BU	VP5	12				
13	GN WH	VP6 14	Com	VP12 14	Com	13	GN WH	VP6	14				
14	BN GN	VP6 12	VP6 14	VP13 14	VP12 14	14	BN GN	VP6	12				
15	YE WH	VP7 14	VP6 12	VP14 14	VP13 14	15	YE WH	VP7	14				
16	BN YE	VP7 12	VP7 14	VP15 14	VP14 14	16	BN YE	VP7	12				
17	GY WH	VP8 14	VP7 12	VP16 14	VP15 14	17	GY WH	VP8	14				
18	BN GY	VP8 12	VP8 14	VP17 14	VP16 14	18	BN GY	VP8	12				
19	WH PK	VP9 14	VP8 12	VP18 14	VP17 14	19	WH PK	VP9	14				
20	BN PK	VP9 12	VP9 14	VP19 14	VP18 14	20	BN PK	VP9	12				
21	BU WH	VP10 14	VP9 12	VP20 14	VP19 14	21	BU WH	VP10	14				
22	BN BU	VP10 12	VP10 14	VP21 14	VP20 14	22	BN BU	VP10	12				
23	RD WH	VP11 14	VP10 12	VP22 14	VP21 14	23	RD WH	VP11	14				
24	BN RD	VP11 12	VP11 14	VP23 14	VP22 14	24	BN RD	VP11	12				
25	BK WH	Com	VP11 12	Com	VP23 14	25	BK WH	VP12	14				
-						26	BK BN	VP12	12				
-						27	GN GY	VP13	14				
-						28	YE GY	VP13	12				
-						29	GN PK	VP14	14				
-						30	YE PK	VP14	12				
-						31	GN BU	VP15	14				
-						32	YE BU	VP15	12				
-						33							
-						34							
-						35							
-						36							
-						37							
-						38							
-						39							
-						40							
-						41							
-						42							
-						43	RD GN	Com					
-						44	RD YE						

VP Valve position

Valve Island 7V, IO-Link Technical Specifications – IO-Link

Dedicated standard interface:

Direct connection to the fieldbus or via a single cable (IO-Link mode) to the IO-Link master.



IO-Link

Type:

- IO-Link mode, used to directly connect to the upper IO-Link master

Power/Data transmission via an M12 plug.

The valve island can be configured with 4-24 valves (double solenoid).

Main technical parameters

Communication type	IO-Link		
Electrical connections	<ul style="list-style-type: none"> • M12 plug, 4 Pin • A code 		
Baud rate	COM3	[kbps]	230.4
	COM2	[kbps]	38.4
Intrinsic power consumption, logic supply PS		[mA]	30
Inherent power consumption, valve power PL		[mA]	30
Maximum number of solenoid coils			48
Maximum number of valves			24
Ambient temperature		[°C]	-5 --+50
Product weight	Output at the top	[g]	49
	Output on the side	[g]	100
Degree of protection, Compliance EN 60529	IP67		
CE Sign (See declaration of conformity)	Compliance EU EMC		
Corrosion resistance level CRC	2		
IO-Link handles data length	6 output bytes		

Pin assignment IO-Link

	Pin	Distribution	Illustrate
	1	24V _{EL/SEN}	Operating power (electronics, sensors/inputs)
	2	24V _{VAL/OUT}	Load power supply (valve/output)
	3	0V _{EL/SEN}	Operating power (electronics, sensors/inputs)
	4	C/Q	Communication

Order data

	Illustrate	Order NO.	Type
Electrical interface for IO-Link			
	Drive up to 24 double solenoid valves	00BW11	FNI-IOL-751-V06-B
	Drive up to 16 double solenoid valves	00BW12	FNI-IOL-751-V08-B
	Drive up to 8 double solenoid valves	00BW14	FNI-IOL-751-V12-B
Interface technology for IO-Link			
	Straight socket, M12, 4 Pin, for IO-Link interface	64F941	FCC M435-0000-1A-45X475

Valve terminal 7 V, Ethernet interface Technical parameters

The following protocols are supported:

- Profinet
- Ethernet/IP
- EtherCat
- CC-Link IEFB



Main technical parameters

Size W x L x H	[mm]	105.6X50X39
Fieldbus interface		2x M12 socket, 4 Pin
Operating voltage range	[V DC]	18 -30.2
Max power	[A]	4
Max number of solenoid coils		48
Maximum valve positions		24
Product weight	[g]	85
Cable length	[m]	100

Material

Shell	Reinforced polyamide
Material Precautions	Compliance RoHS

Pin distribution for power interface

	Pin	Distribution	Illustrate
	1	24V	Load power supply (valve/output)
	2	0V	Load Power (Valve/Output)
	3	24V	Operating power supply (electronic components, sensors/inputs)
	4	0V	Operating power supply (electronic components, sensors/inputs)





Order data– CTEU

	Illustrate	Order NO.	Type
Bus node			
	Support Profinet, Ethernet/IP, EtherCAT, CC-Link IEFB communication protocol, drive up to 24 double electric control valves	007F11	CTEU-MPL-24
	Support Profinet, Ethernet/IP, EtherCAT, CC-Link IEFB communication protocol, drive up to 16 double electric control valves	007F12	CTEU-MPL-16
	Support Profinet, Ethernet/IP, EtherCAT, CC-Link IEFB communication protocol, drive up to 8 double electric control valves	007F14	CTEU-MPL-8
	Support Modbus-RTU communication protocol, drive up to 24 double electric control valves	007F21	CTEU-MBR-24
	Support Modbus-RTU communication protocol, drive up to 16 double electric control valves	007F22	CTEU-MBR-16
	Support Modbus-RTU communication protocol, drive up to 8 double electric control valves	007F24	CTEU-MBR-8

Connect

	Male, M12x1, 4-pin, D-coded, for communication connections	0CF381	FCC M474-0000-2D-55X475
	Male, M12x1, 4-pin, D-coded, for communication connection, pre-cast cable	0C4501-xxx	FCC-M414-xxxx-
	Female, M12x1, 4-pin, Type A coding for power connection	64F941	FCC M435-0000-1A-45X475

Order data						
Illustrate		Order NO.		PU ¹⁾		
Straight head muffler						
	For M5 thread		UC-M5	1		
	For G $\frac{1}{8}$ thread		UC-1/8	1		
	For G $\frac{1}{4}$ thread					
	For G $\frac{3}{8}$ thread		UC-3/8	1		
Plastic muffler						
	For M5 thread		UC-M5	1		
	For G $\frac{1}{8}$ thread		UC-1/8	1		
	For G $\frac{1}{4}$ thread					
	For G $\frac{3}{8}$ thread		UC-3/8	1		
Blind plate (including sealing ring and screws)						
	Vacancy width 18 mm	For 4V Series Backplanes	4V1BB	1		
	Vacancy width 22 mm		4V2BB	1		
	Vacancy width 27 mm		4V3BB	1		
	Vacancy width 10 mm	For 7V series baseplate	7V05BB	1		
	Vacancy width 15 mm		7V1BB	1		
	Vacancy width 18 mm		7V2BB	1		
	Vacancy width 24 mm		7V3BB	1		
Main air inlet threaded push-in fittings, in-line						
	G $\frac{1}{8}$ thread	For trachea Ø 6 mm	–	QS-G1/8-6	1	
		For trachea Ø 8 mm	–	QS-G1/8-8	1	
		For trachea Ø 10 mm	–	QS-G1/8-10	1	
		For trachea Ø 12 mm	–	QS-G1/8-12	1	
	G $\frac{1}{4}$ thread	For trachea Ø 6 mm	–	QS-G1/4-6	1	
		For trachea Ø 8 mm	–	QS-G1/4-8	1	
		For trachea Ø 10 mm	–	QS-G1/4-10	1	
		For trachea Ø 12 mm	–	QS-G1/4-12	1	
	G $\frac{3}{8}$ thread	For trachea Ø 10 mm	–	QS-G3/8-10	1	
		For trachea Ø 12 mm	–	QS-G3/8-12	1	
		Main air inlet threaded push-in fitting, angled				
			G $\frac{1}{8}$ thread	For trachea Ø 6 mm	–	QSL-G1/8-6
For trachea Ø 8 mm	–			QSL-G1/8-8	1	
For trachea Ø 10 mm	–			QSL-G1/8-10	1	
For trachea Ø 12 mm	–			QSL-G1/8-12	1	
G $\frac{1}{4}$ thread	For trachea Ø 6 mm		–	QSL-G1/4-6	1	
	For trachea Ø 8 mm		–	QSL-G1/4-8	1	
	For trachea Ø 10 mm		–	QSL-G1/4-10	1	
	For trachea Ø 12 mm		–	QSL-G1/4-12	1	
G $\frac{3}{8}$ thread	For trachea Ø 10 mm		–	QSL-G3/8-10	1	
	For trachea Ø 12 mm		–	QSL-G3/8-12	1	

Order data					
Illustrate		Order NO.		PU ¹⁾	
Threaded quick-plug connector, in-line					
	M5 thread	For trachea Ø 4 mm	–	QSM-M5-4	1
		For trachea Ø 6 mm	–	QSM-M5-6	1
	P $\frac{1}{8}$ thread	For trachea Ø 4 mm	–	QS-P(G)1/8-4	1
		For trachea Ø 6 mm	–	QS-P(G)1/8-6	1
		For trachea Ø 8 mm	–	QS-P1/8-8	1
		For trachea Ø 10 mm	–	QS-P1/8-10	1
	P $\frac{1}{4}$ thread	For trachea Ø 6 mm	–	QS-P(G)1/4-6	1
		For trachea Ø 8 mm	–	QS-P1/4-8	1
		For trachea Ø 10 mm	–	QS-P1/4-10	1
		For trachea Ø 12 mm	–	QS-P1/4-12	1
	P $\frac{3}{8}$ thread	For trachea Ø 8 mm	–	QS-P3/8-8	1
		For trachea Ø 10 mm	–	QS-P3/8-10	1
For trachea Ø 12 mm		–	QS-P3/8-12	1	
For trachea Ø 16 mm		–	QS-P3/8-16	1	
Push-in fitting with thread, angled					
	M5 thread	For trachea Ø 4 mm	–	QSML-M5-4	1
	P $\frac{1}{8}$ thread	For trachea Ø 6 mm	–	QSL-P1/8-6	1
		For trachea Ø 8 mm	–	QSL-P1/8-8	1
Threaded Push Coupling, Extended, Right Angle					
	M5 thread	For trachea Ø 4 mm	–	QSMLL-M5-4	1
	P $\frac{1}{8}$ thread	For trachea Ø 6 mm	–	QSLP1/8-6	1
		For trachea Ø 8 mm	–	QSLP1/8-8	1
Plug					
	For M5 thread			B-M5	1
	For G $\frac{1}{8}$ thread			B- $\frac{1}{8}$	1
	For G $\frac{1}{4}$ thread			B- $\frac{1}{4}$	1
	For G $\frac{3}{8}$ thread			B- $\frac{3}{8}$	1

1) Packaging unit.